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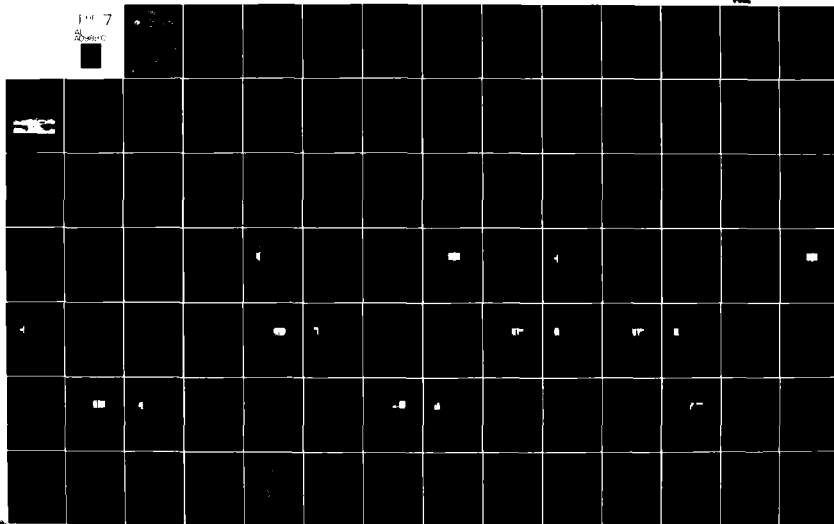
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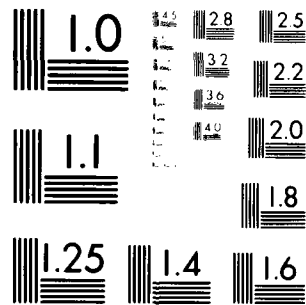
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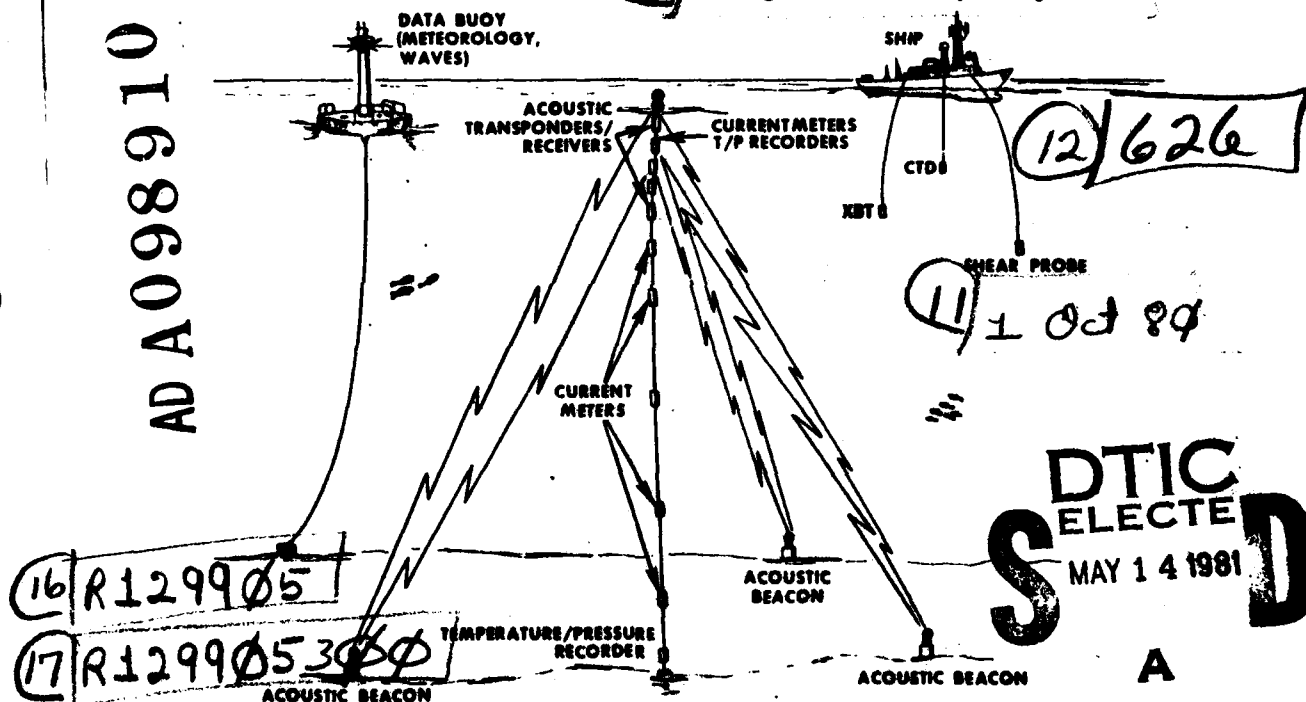
Naval Ocean Research
and Development Activity
NSTL Station, MS 39529



(6) A Comprehensive Graphical Representation
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SEPTEMBER 1980

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ABSTRACT

The Acoustically Tracked Ocean Mooring (ATOM) study spanned ^{a one month} ~~the~~ period. ~~15 December 1979 - 17 January 1980~~. Time series of currents, temperatures and mooring parameters as well as profiles of temperature, conductivity and current were obtained. This report presents these data and derived statistics as a graphical summary.

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1.0 INTRODUCTION

This report contains a graphical data summary of the physical oceanographic and meteorological data collected during the Acoustically Tracked Oceanographic Mooring (ATOM) experiments that spanned the period 15 December 1979 through 17 January 1980. The following paragraphs summarize the results presented in the extensive report.

1.1 OBJECTIVES

There are five major objectives to the present study, three of which are primarily scientific in nature and two of which are mainly technical. These are:

Scientific

- a) to determine the degree to which high frequency variability in the upper range of the internal gravity wave frequency spectrum is strongly dependent on the proximity of the peak in the buoyancy profile and on the effect of modulation by low frequency processes;
- b) to determine the degree to which low frequency processes are determined by local surface meteorology;
- c) to measure the vertical coherence of the high frequency current and temperature fields;

Technical

- d) to investigate the contamination of the current and temperature data induced by mooring motion; and
- e) to determine whether it is possible to remove a significant amount of the mooring motion contamination.

1.2 DATA REQUIREMENTS

In order to meet the objectives, current and temperature data were required at a rapid sampling rate (about 1 sample/minute) in the upper ocean (100 m - 500 m) over a period of about one month. At the times of deployment and recovery, profiles of temperature and salinity as functions of depth were required to assess the local buoyancy profile and to provide information of the vertical wavenumber structure of these quantities. Current profiles (taken with expendable probes) were required to obtain detailed information on the vertical wavenumber structure of the current field on scales smaller than the current meter separation. XBT and AXBT surveys were required to assess the mesoscale features of the oceanic circulation. Meteorological data and wave data from nearby data buoys were required to determine the degree to which the local meteorology affects the low frequency processes. In order to measure the mooring motion, acoustic tracking devices, force-vector recorders and temperature-pressure recorders were required.

1.3 DATA DESCRIPTION

In this section, the observed data will be summarized, beginning with the large scale ocean features which provided the background environment for this study. This will be followed by a short description of the meteorology, the fine scale structures observed at the beginning and end of the experiment, the observed currents and temperatures. The mooring motion will be discussed last.

1.4 LARGE SCALE FEATURES

The dominating oceanic feature of the Gulf of Mexico is the Loop Current and its associated eddies. An airborne XBT survey conducted as the ship was enroute to the deployment site (Dec. 15, 1979) indicated the presence of strong horizontal temperature gradients in the operating area. Depth contours of the isotherms indicated the existence of a strong baroclinic current toward the northwest. From the limited survey, there are not enough data to determine whether this region of strong currents was a direct part of the Loop Current or a recently separated eddy. Rough calculations made shortly after the survey indicated that the vertical geostrophic shear was on the order of 20 cm/s/100 m. Comparison of LORAN-C navigational data with dead reckoning positions indicated the presence of surface currents of 1 to 4 knots (0.5 to 2 m/s) during the recovery and deployment cruises. Subsurface measurements of the currents at depths between 300 and 700 m over the time period of the mooring indicated current speeds between 20 and 70 cm/s.

1.5 METEOROLOGY

Meteorological data from two NOAA/NDBO buoys, numbers 42001 and 42002, were obtained from the NOAA Data Buoy Office, NSTL Station, and the daily weather maps for the period of the experiment were obtained from the National Weather Service, NOAA. Data buoy 42002 operated correctly during the entire period. The nearer data buoy, 42001, lost wind speed and direction as well as barometric pressure information from 2 January 1980 - 15 January 1980. Wave height and period information were lost for the period 5 January 1980 - 8 January 1980. Air and water temperature information were lost between 4 January 1980 and 13 January 1980.

From the data obtained by buoy 42002, there were four major events (defined as winds over 10 m/s and waves over 2 m). These occurred on December 17-18, 23-25, January 4, and January 13. For the data available from 42001, the major events tended to lag those at 42002 by about 6-8 hours. Events occurred on December 17-18, 24-26, December 31 - January 1, (large waves were observed on January 5, 11, and 13, but no wind data were obtained for those days). A cold front passed through the region on December 15 which then became stationary through the 17th. The next cold front passed through the region between December 24 and 26. This was followed by a cold front passage that occurred between December 30 and 31. A cold front passed on January 5. Between January 9 and 14, a front, alternately cold, stationary, warm, cold, slowly passed through the region. Thus, all periods of strong wind and waves occurred with the passage of cold fronts. The rapid changes in wind speed and direction typically generate internal/inertial waves in the water, and these "events" will be analyzed to determine their effects on high wave number vertical shear.

1.6 FINE SPATIAL SCALE FEATURES

The fine scales (1-10 m in the vertical, 1-10 km in the horizontal) were determined by XBTs, CTDs and XCPs (Expendable Current Probes - also called Shear Probes). XBT and CTD data were collected on both the deployment and recovery cruises; XCP data were collected only on the deployment cruise, soon after deployment of the mooring.

1.7 XBT DATA

On the deployment cruise, the XBT's were dropped in a very closely spaced pattern, generally within the region bounded by 25°45'N, 26°00'N, 89°36'W 89°55'W (Sections 4.1 and 4.2). The close spacing of stations provided a detailed

look at the horizontal structure of the temperature field that existed just before the mooring deployment. An additional section was made on the return from the operations area.

The XBT spacing on the recovery cruise was considerably larger than during the deployment phase, sections being made on both the trip to and the trip from the operations area. Time did not permit a detailed pattern as was run on the deployment cruise. Results of the second sampling prior to mooring recovery indicated that the basic upper ocean temperature structure was similar to the deployment phase, but fine structure variability at depth was more apparent.

The XBT data were taken with the aid of a mini-computer (Hewlett-Packard 9825A) based system. The system was originally developed by NORDA Code 350 with the data being recorded on magnetic tape. The system was considerably modified by Mark Bergin, NORDA Code 331, to record the data on a disk mass storage device. The plotting software was also developed by Bergin to produce waterfall plots of the temperature as a function of depth with the spacing between the various plots determined by the great circle distance between stations. The waterfall program was subsequently modified to plot the temperature, high-passed in the vertical, to be plotted as waterfall diagrams. The two types of waterfall plots are shown in Sections 4.1 and 4.2.

1.8 CTD DATA

During the deployment cruise, most of the CTD stations were taken in the same region bounded by 25°45'N, 26°00'N, 89°40'W and 89°55'W. The majority of the stations were made near the mooring. On the recovery cruise, a number of CTD stations (1-21) were made just downstream of the mooring while the rest were made on a series of three transects northwest of the mooring position.

CTD No. 4017 was employed in these measurements. Calibrations were performed prior to the two cruises. The average static errors for temperature, conductivity and salinity were:

$$E_T = -0.0014^{\circ}\text{C}$$

$$E_C = -0.00052 \text{ mmho/cm}$$

$$E_S = -0.00014 \text{ }^{\circ}\text{oo}$$

Dynamic drop calibration tests were also performed. The time constants derived from these tests were approximately

$$t_T = 243 \text{ ms}$$

$$t_C = 59 \text{ ms.}$$

The temperature and salinity profiles from the deployment cruise showed a very sharp mixed layer down to about 100 m. From about 100 m to about 800-1000 m a strong thermocline was observed. Just below the mixed layer, the salinity was found to increase until a peak was reached at about 150 m. The salinity then decreased with depth until a weak minimum was found near 800 m. Below about 1200 m, both the temperature and salinity remained approximately constant. These features are illustrated in Sections 4.3.1 and 4.4.1.

The profiles of sigma-t, Brunt Vaisala (B-V) frequency as a function of depth are presented in Sections 4.3.2 and 4.4.2. A very sharp peak in the buoyancy profile (with a B-V frequency of about 24 cph) is typical near 100 m during the deployment. The profiles below about 100 m are characterized by a large number of oscillations in the vertical of the B-V profile, indicative of a strongly stepped structure. Between about 200 m and 500 m the average B-V frequency is about 3 cph with fluctuations from between 2 and 5 cph. Above 100 m, the water is approximately isopycnic, with the B-V frequencies below about 1 cph.

The temperature-salinity curves for the region during the deployment phase are all basically very similar. T-S plots are shown in Sections 4.3.3 and 4.4.3.

The CTD data taken during the deployment and recovery phases differed notably. In the recovery phase, salinity was not homogeneous down to 100 m, typically several mixed layers appeared to be present. The temperature profiles also exhibited a layered structure. The salinity maxima occurred near 170 m and salinity minima near 800 m, but the profiles generally had more fine structure than those taken in the previous phase. Indeed, near 800 m, there is considerable fine scale structure in both the temperature and salinity profiles.

The recovery profiles lack a single strong peak in buoyancy frequency that occurred earlier. The maximum B-V frequency is about 12 cph: about half of the maximum observed during the deployment cruise.

The T-S curves also exhibit significant differences from those obtained on the deployment cruise. The presence of a "nose" on the T-S plots and the curvature inflection are evidence of horizontal intrusions and precipitous formation of new water types.

1.9 XCP DATA

The XCP (Expendable Current Probe or Shear Probe) is a small dropped probe, similar to an XBT in that it measures temperature as a function of time and the depth is determined by an empirical equation relating depth to time of fall. It differs from the XBT in that it also measures the water current relative to the instrument as it falls through the water. The XCP senses the electric field potential induced by the motion of the ocean current through the earth's magnetic field.

About 45 of these probes were dropped during the deployment cruise. When possible, the XCPs were dropped when a concurrent CTD cast reached 350 m. This permits the calculation of vertical profiles of Richardson number in the vicinity of the mooring shortly after its deployment. It will also permit the intercomparison between shear observed by the XCPs and the current meters on the mooring during the one day period following implantation.

The uncorrected XCP traces are presented in Section 7.0. It can be seen that between about 100 m and 200 m, the shear in the V profile is about 35 cm/s/100 m. In addition there are small scale variations in the profile with vertical length scales on the order of about 10-20 m. Similar small scale variations are clearly seen in the U profile, with typical scale sizes on the order of 10-30 m.

1.10 CURRENTS AND TEMPERATURES

The currents were measured by 21 current meters on a subsurface mooring located at 25°48.33'N, 89°44.65'W. Thirteen NBIS ACMs and eight VACMs were employed. The mooring configuration is shown in Figure 14. The depths shown on the mooring schematic diagram are the nominal depths of the instruments, assuming no current. The actual depths were considerably different from the design depths. The time history of the depths of the current meters will be discussed in detail in the following paragraphs.

Due to the hydrodynamic self-interference caused by the current meter's structure, the accuracy of the meters is estimated to be about +5% of the measured speed. The variations in accuracy are strongly dependent on the orientations of the meters with respect to the flow.

All current meters had thermistors to measure temperature. In addition, four temperature-pressure recorders were employed on the mooring for more detail in temperature measurement.

All the ACMs were set to a sampling interval of 1 minute. The upper two VACMs were set to a sampling interval of 15/16 minute, while the lower six VACMs were set to sample at 15/8 minute. For the ACMs, the maximum frequency which can be resolved is 30 cph. This is about an order of magnitude greater than the expected high frequency interval wave band, which could be expected near 3 cph (based on the B-V frequency between 200 and 500 m).

Sections 3.1.2 and 3.2.2 provide a synopsis of current meter data. It can be seen that the currents were about 40 cm/s or less until December 26, rising to a maximum value of nearly 70 cm/s on January 2. The currents remained strong until January 8, when they fell below 50 cm/s. Two minima were noted, one on January 9 and the other on January 11.

The currents were typically toward the WNW. The only time there was a southerly component occurred between December 26 and 28. The currents were northerly of NW only on December 31 - January 1 and January 6-7.

The statistics for the currents for this period are summarized in terms of two-dimensional (bivariate) histograms of current speed and direction in Sections 3.1.1 and 3.2.1. Separate speed and direction histograms plus the cumulative frequency plots of the current speeds are also given in these sections.

The current meters also recorded temperatures; typically, two records of temperature for each ACM and one per VACM are presented. All of the upper meters registered a minimum on December 31/January 1 coinciding with the period of maximum current. The bottom meter recorded a maximum temperature during the same period indicating advection of slightly warmer water at depth. This period encompassed the maximum depression of the mooring registered by the pressure recorders. Diurnal tidal frequency modulations of the pressure and temperature series are direct evidence that tidal currents exert considerable drag on the mooring causing the upper part of the mooring to "bob" vertically 20 m to 40 m during tidal cycles.

1.11 MOORING MOTION

The major technical goals of this study require investigation of the types of mooring motions that occur on a high tension subsurface mooring, the effects of the mooring motion on the physical oceanographic data and the possibility of removing the effects of mooring motion contamination.

A number of different sensors were employed which could give information on the types of mooring motion. The gross horizontal motions of the mooring were determined by acoustic ranging. Two recording receivers/transmitters (R/Ts) were placed on the mooring at the nominal depths of 99 m and 220 m. Three transponders were located on the bottom which gave three ranges of both of the R/Ts. This is theoretically sufficient to determine the position of the R/Ts. However, one of the transponders failed early in the deployment and only two were available for the entire period. Nevertheless, even if only two ranges are known and the depths of the R/Ts are known functions of time, it is possible to determine the horizontal positions of the R/Ts. In the preliminary work presented here (and computed by R. Spindel (WHOI)), the depths were assumed to be 100 and 200 m for the entire period. This introduces an error which can later be corrected by using the actual depths.

In addition to the direct ranging acoustic positioning devices, two sets of Doppler position locators were installed on the mooring near the R/Ts. Due, apparently to unanticipated reflections with the water surface, the Doppler devices did not return useful data in the low frequency range. Extraction of useful data from the Doppler data is still questionable at the time of this report.

To determine the orientation, acceleration and tension on the mooring line, three Force Vector Recorders (FVRs) were placed in the mooring. Of these, only one operated for the entire period. One failed entirely and the third, while remaining in partial operation for the beginning period of the deployment, did not appear to return any useful data.

In order to determine the depth of the mooring as a function of time, four temperature-pressure recorders (TPs) were installed in the mooring. These all worked properly for the entire mooring period, but some data were lost when the instrument depth exceeded the pressure/temperature limits. However, it is probable that the total depth record can be reconstructed with the use of the known temperature/depth relation from the CTD profiles and the temperature curves obtained from the current meters.

Finally, both types of current meters provided some information of the torsional characteristics of the mooring line. The case orientation of the ACMs were recorded every 8 minutes. The case orientations and vane orientations on the VACMs were recorded instantaneously every sampling period. While these were not as fast as the sampling rate of the FVR, they did provide ancillary torsional information.

1.12 ACOUSTIC TRACKING RESULTS

Relative north-south and east-west displacements of the lower R/T are shown in Section 5.0. The maximum southward displacement occurred on December 27-28 and the maximum westward displacement occurred during the same period. The reader should note that this is consistent with the current meter records, and it can be seen that the currents were between about 50 and 60 cm/s and that the current had a southward component during that period. The maximum northward displacement occurred between

December 30 and January 1. This coincided with the period of strongest current and the most northward direction of the current as well as the deepest excursion of the mooring. East-west displacements of the mooring were small.

1.13 TEMPERATURE-PRESSURE RECORDER DATA

Four temperature-pressure recorders were used; the pressure and temperature record for the uppermost T-P recorder over the period of the experiment was strongly affected by the depression of the mooring. The pressure recorded went off scale between December 29 and January 2. The deepest penetration of the T-P recorder occurred during this period. The pressure data and the concurrent temperature data show a striking in-phase correlation. Due to this strong correlation, it is possible to relate the approximate depth to the observed temperature and thus, the depths during the missing period can be inferred from the temperatures measured on the current meters.

1.14 FORCE VECTOR RECORDER (FVR) DATA

Only the uppermost FVR worked and returned data from the entire period of the experiment. The data returned consisted of three orthogonal components of acceleration and two orthogonal (nominally horizontal) components of magnetic field.

Until December 27, the records of all measured components remained quite smooth. Abruptly, the signals became very noisy, with the exception of the vertical component of acceleration. In particular, the X-acceleration channel had two times the signal level of the Y-acceleration channel, and the Y-magnetic channel had twice the level of the X-magnetic channel. It is possible that the data after December 27 were highly aliased due to very rapid transverse vibrations and torsional rotations, however, this hypothesis does not appear to be consistent with the data. The transition from the period of smooth data to the period of very noisy data occurs without a harbinger, so it is difficult to connect it with evolving processes.

The magnetic data for the FVRs have been converted into angular displacements with respect to magnetic north. During the period of noisy data, the orientation of the FVR varied by about 120° , with each sample appearing independent of the previous sample (the sampling interval was about 3 sec). Such series are indicative of heavily aliased sampling, instrument noise or an extremely rapid vacillation of the mooring element orientation.

1.15 CURRENT METER ORIENTATION DATA

The case orientations of the uppermost VACM were examined during the same period as the noisy FVR data were first observed. The case orientations for one hour were sampled once every 15/16 minute and showed a range of about 20° - 30° during this period. A similar examination was made of the case orientation of one of the ACMs (the uppermost one, number 058) for this same period. The case orientations were sampled as instantaneous values once every 8 minutes. The range of case orientations varied by about 10° over a one hour period which overlapped the FVR noisy data.

These observations are inconsistent with the notion that the FVR was sampling very rapid torsional rotation of the mooring line. If the VACM were to experience such rapid rotations, one would expect that the observed samples could be statistically independent and fall in the same region as the FVR data. The same argument applies to the ACM orientations data.

One possible explanation for this apparent discrepancy could be that between all instruments, swivels were mounted to reduce torsional coupling. On the other hand, the swivels were under a great amount of tension and such large rotations would be expected to produce step-like jumps in the data from lower instruments. This would give a picture wherein the points would appear independent. This does not appear to be the case with the VACM directly below the FVR, leaving the inconsistency unresolved, unless the FVR experienced an electronic failure. The lack of clear cross-modulation between the x-y axes on both the acceleration and magnetic channels lends support to this latter hypothesis.

1.16 SUMMARY

The current meters and pressure/temperature recorders provided a comprehensive oceanographic data set for the most densely instrumented deep ocean mooring yet attempted. The initial analyses of the time series show relatively little white noise in the high frequency end of the spectrum, but this does not mean that mooring motions do not affect the high frequency spectra. The extensive CTD, XBT, XCP data and surface meteorology provide a firm foundation for integrating mooring instrument records with shipboard data to ascertain dynamic stability, shear and effects of meteorology. A precise assessment of mooring motion effects would have been considerably aided by better records of performance by the Doppler Acoustic System and the force vector recorders, but an effective analysis still can be made with the available data. At the time of submission of this data report, we conclude that high frequency high wave number measurements of the internal gravity wave band are probably "contaminated" by mooring motions in the upper ocean; the extent of contamination is under continuing analysis.

1.17 ACKNOWLEDGEMENTS

We gratefully acknowledge the efforts of John Dahlen and associates of the C.S. Draper Lab, who supplied the FVRs and reduced the T/P recorder data, Dr. Robert Spindel and associates, who supplied the acoustic tracking gear and provided the reduced data, the master and crew of the USNS LYNCH (Fig. 1) who aided the deployment and recovery, Drs. Z. Hallock and O. von Zweck and others of NAVOCEANO for their data reduction and plotting programs and all others who have contributed to this report.



Figure 1.

2.0 NAVIGATION/STATION LOCATIONS (Figures 2-13)

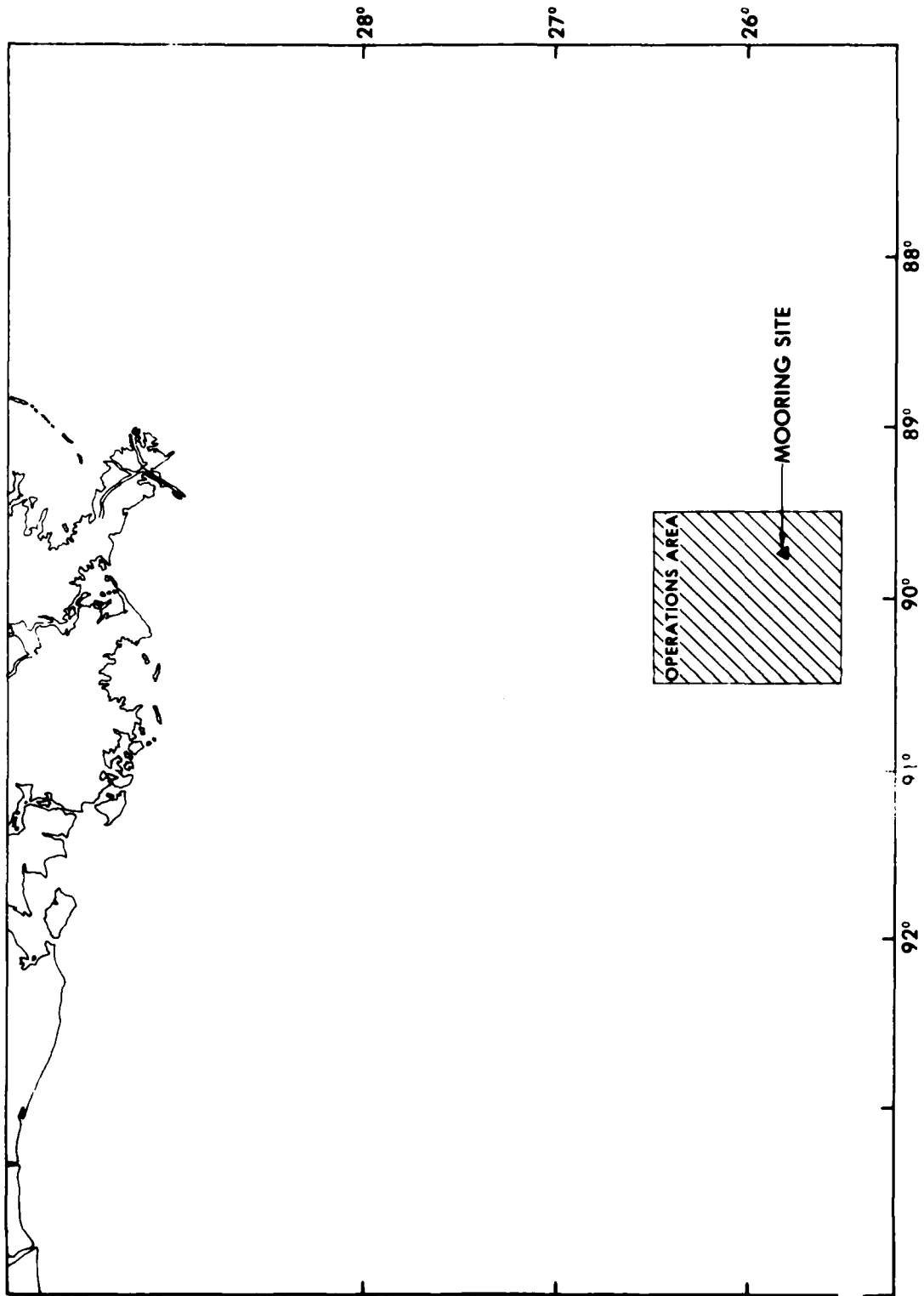


Figure 2.

ATOM '79 - RECOVERY CRUISE

XBT STATIONS - ALL

JANUARY, 1980

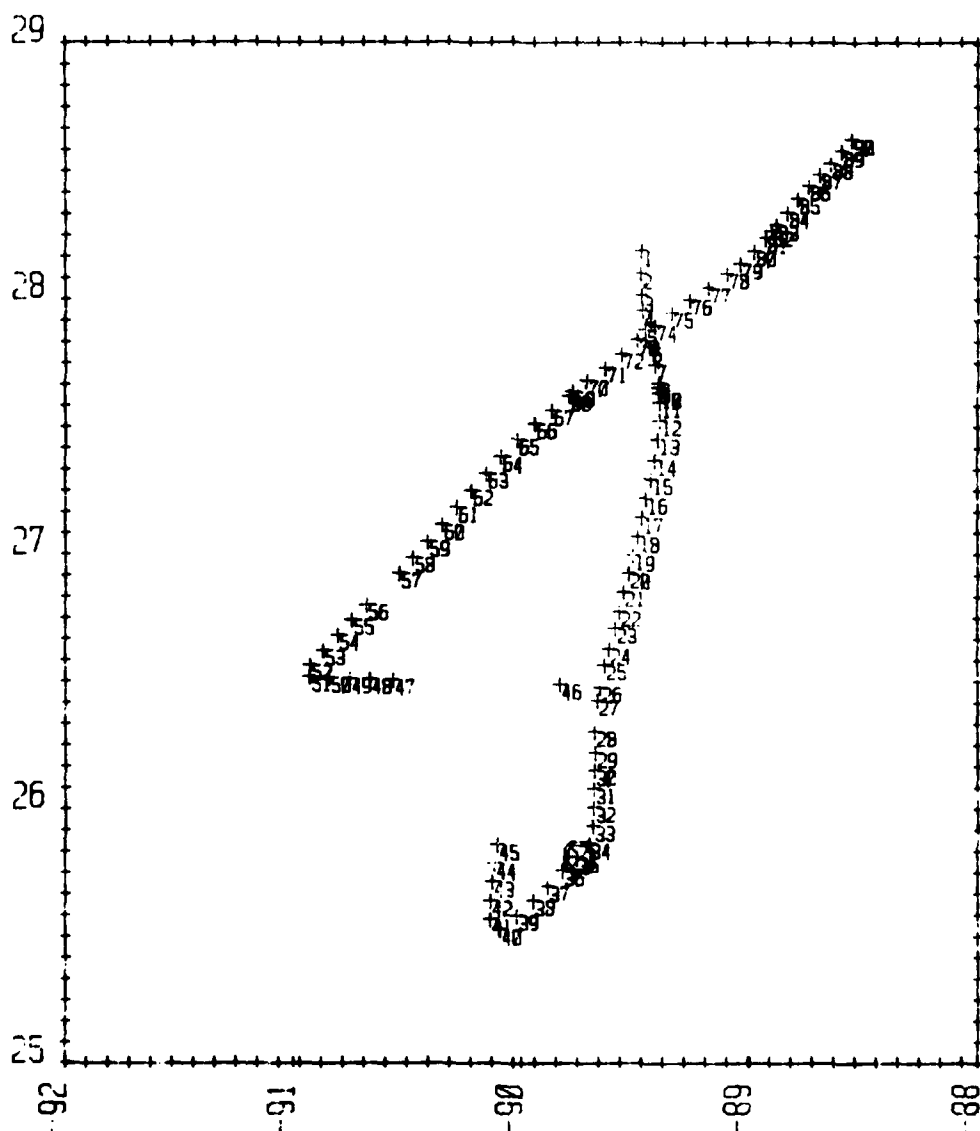


Figure 3.

ATOM '79 - DEPLOYMENT CRUISE

XBT STATIONS - ALL

DECEMBER, 1979

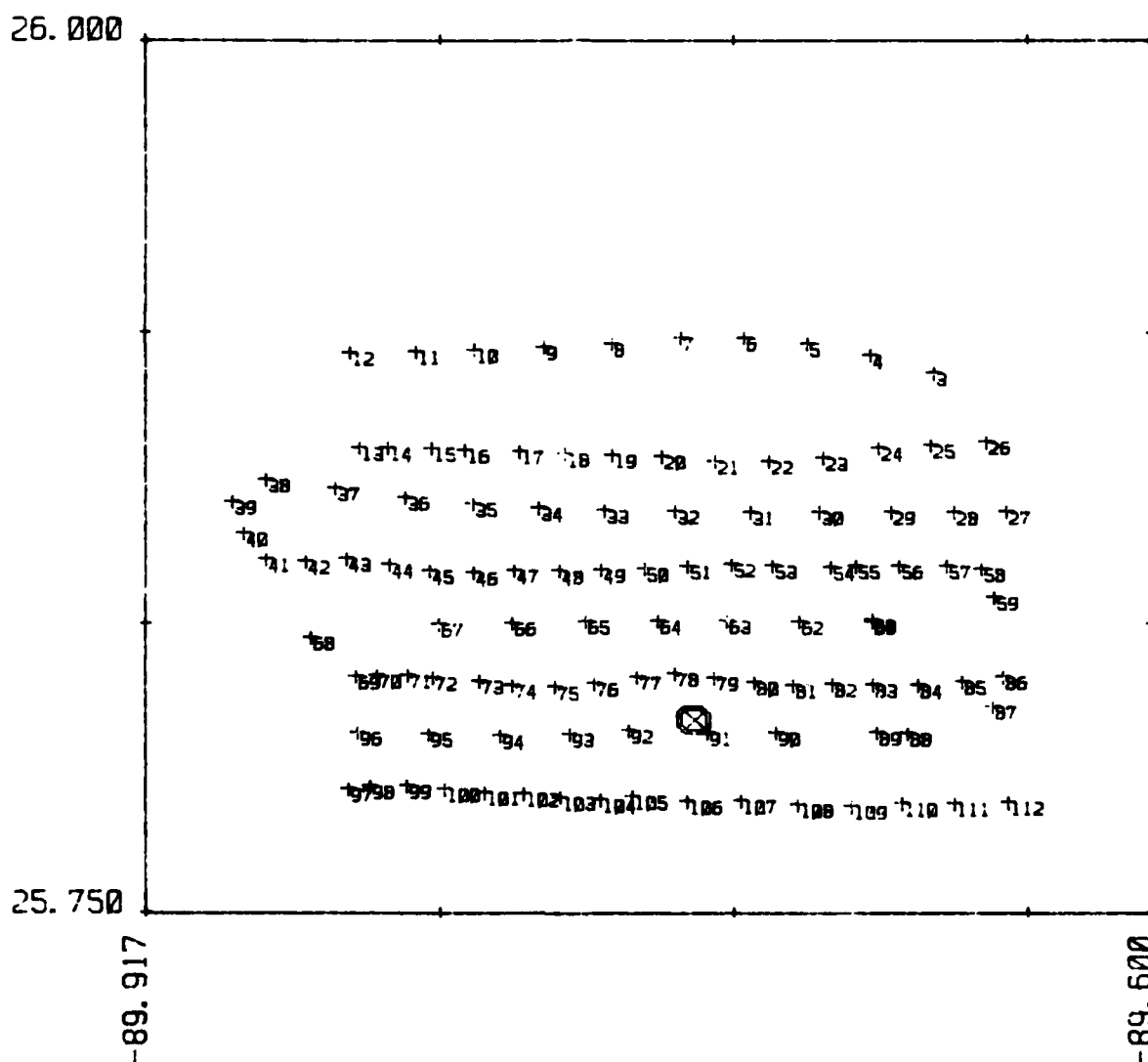


Figure 4.

ATOM '79 DEPLOYMENT CRUISE

CTD POSITIONS - ALL STATIONS

DEC., 1979

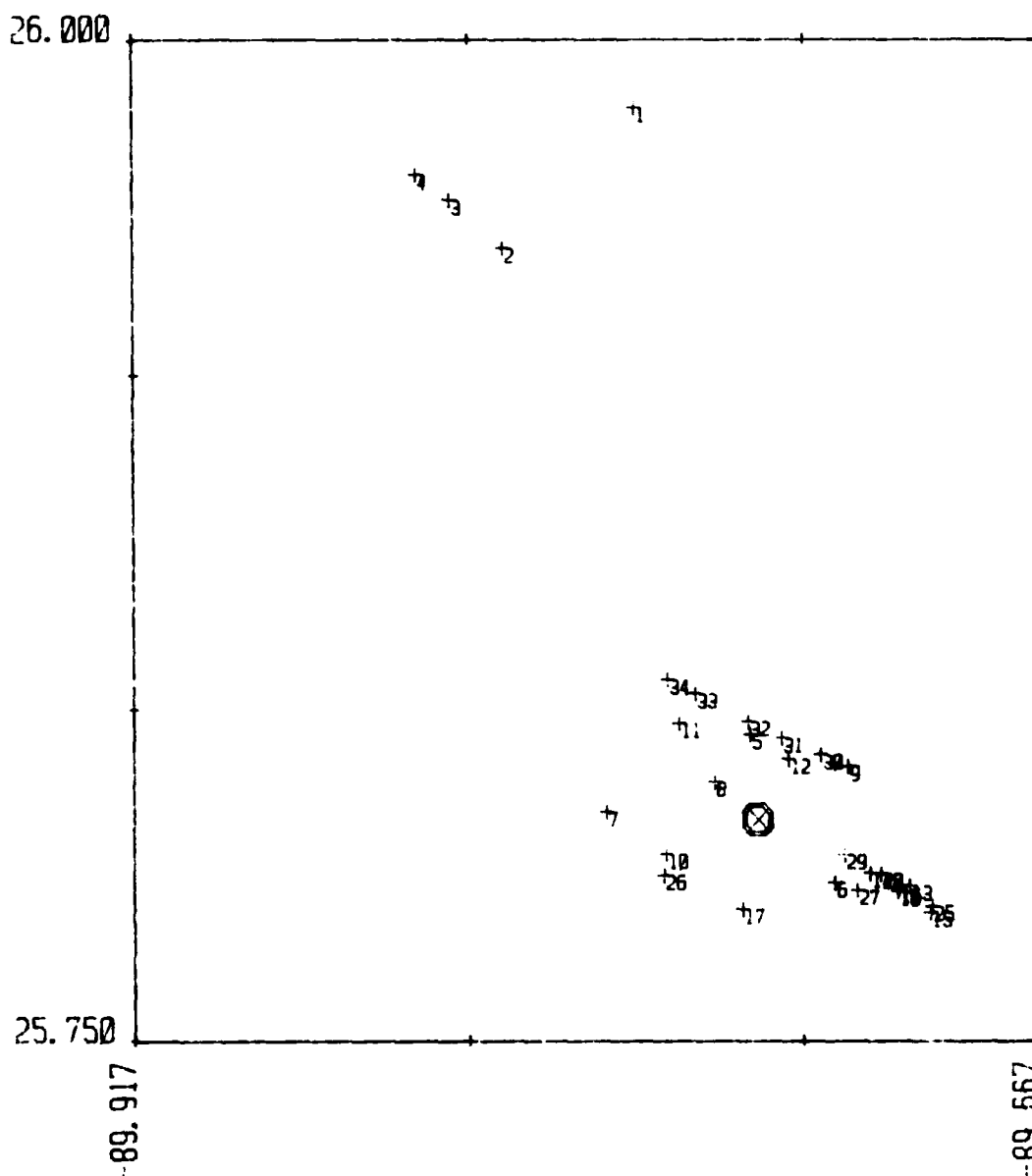


Figure 5.

ATOM '79 DEPLOYMENT CRUISE

CTD POSITIONS STATIONS 5-32

DEC., 1979

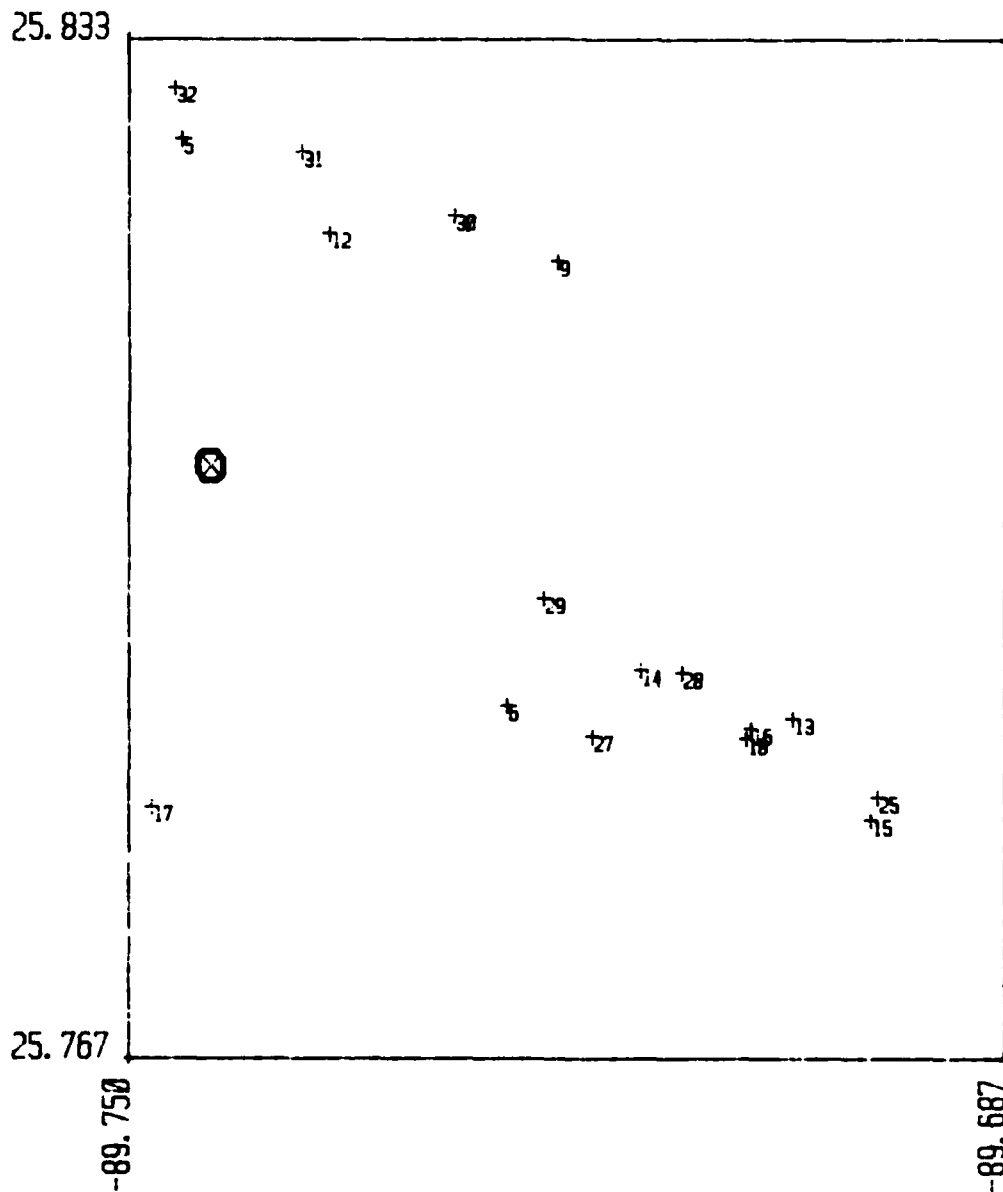


Figure 6.

ATOM '79 RECOVERY CRUISE

CTD POSITIONS, STATIONS 28-40

JANUARY , 1980

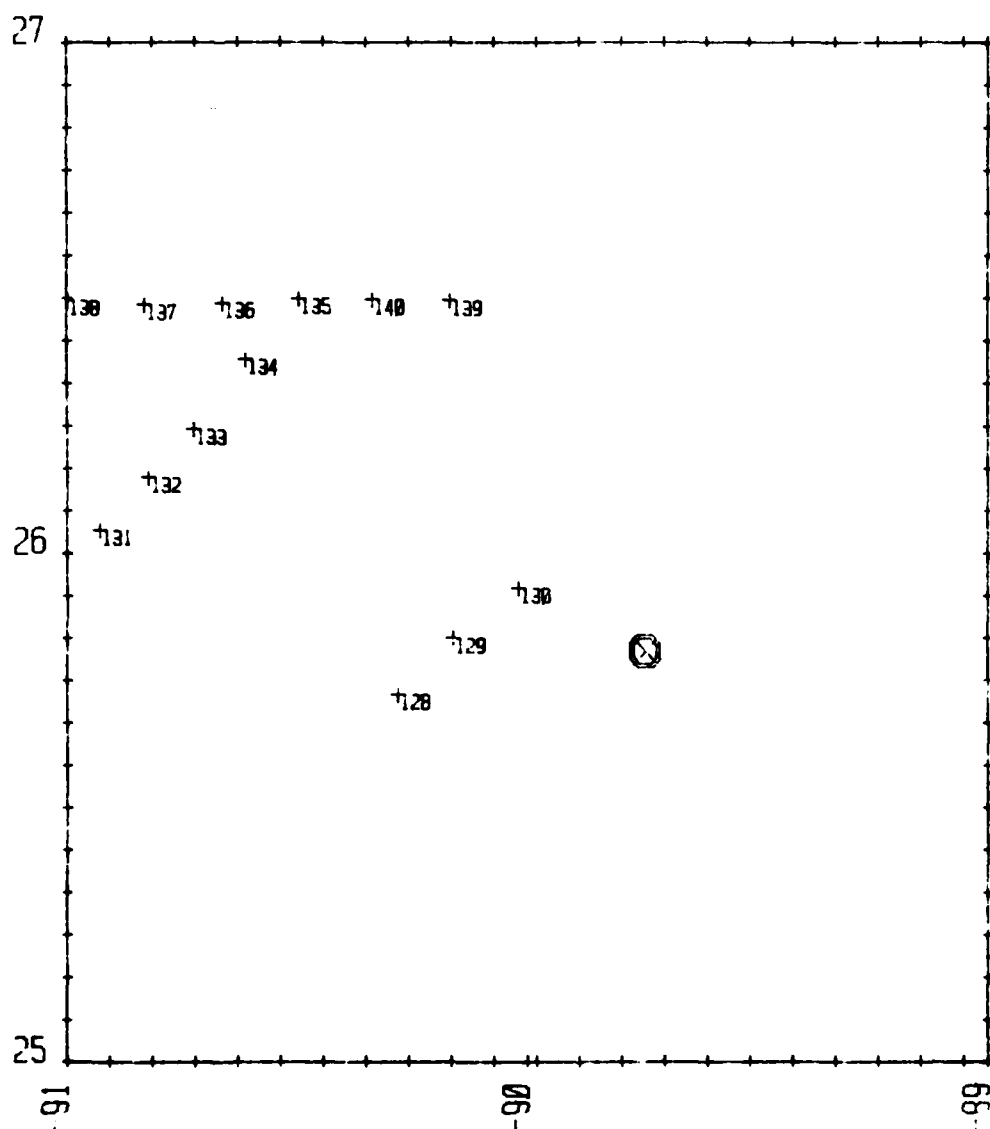


Figure 7.

ATOM '79 RECOVERY CRUISE

(CTD POSITIONS, STATIONS 1-6

JANUARY 1980

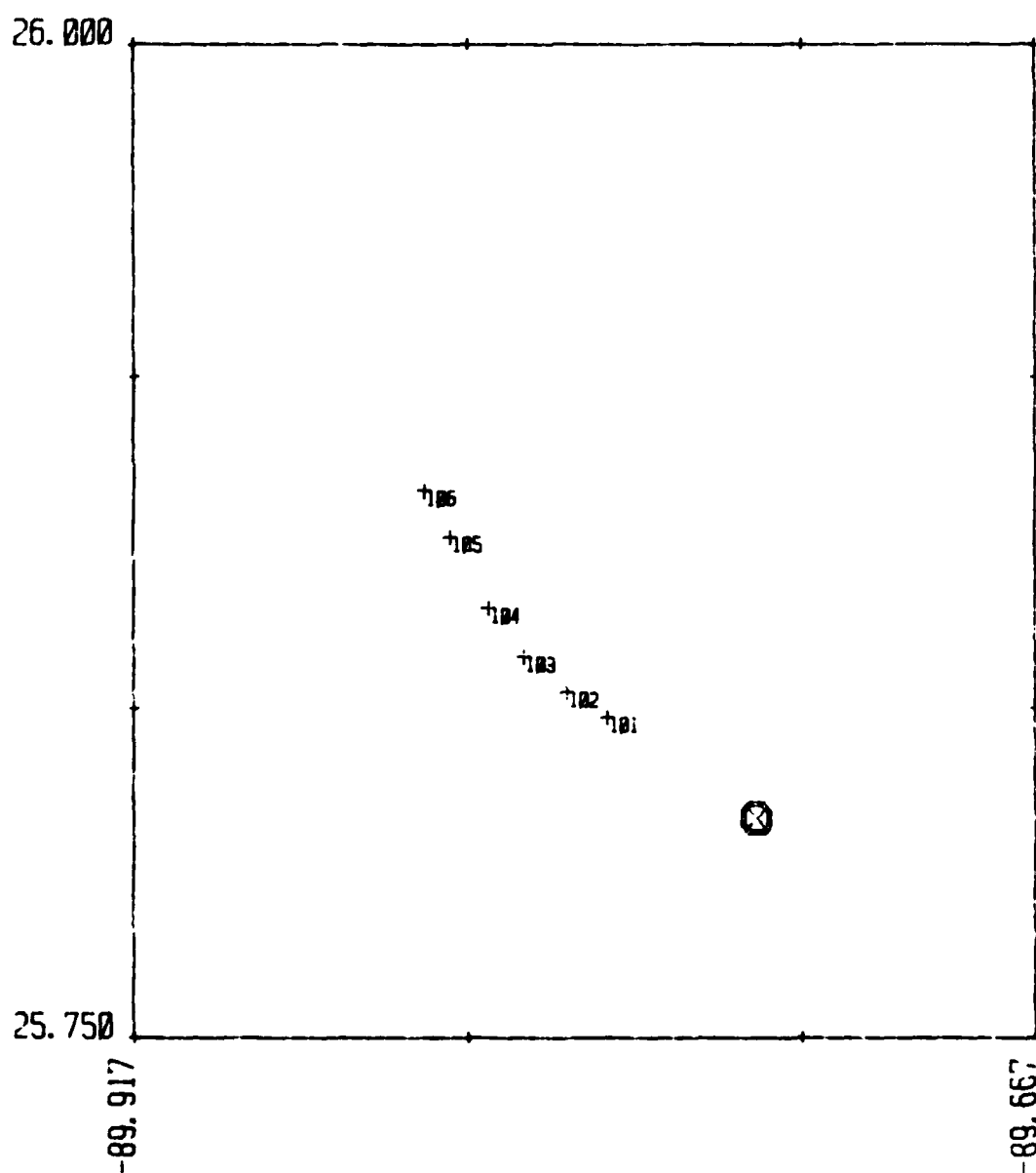


Figure 8.

ATOM '79 RECOVERY CRUISE

CTD POSITIONS, STATIONS 7-21

JANUARY, 1980

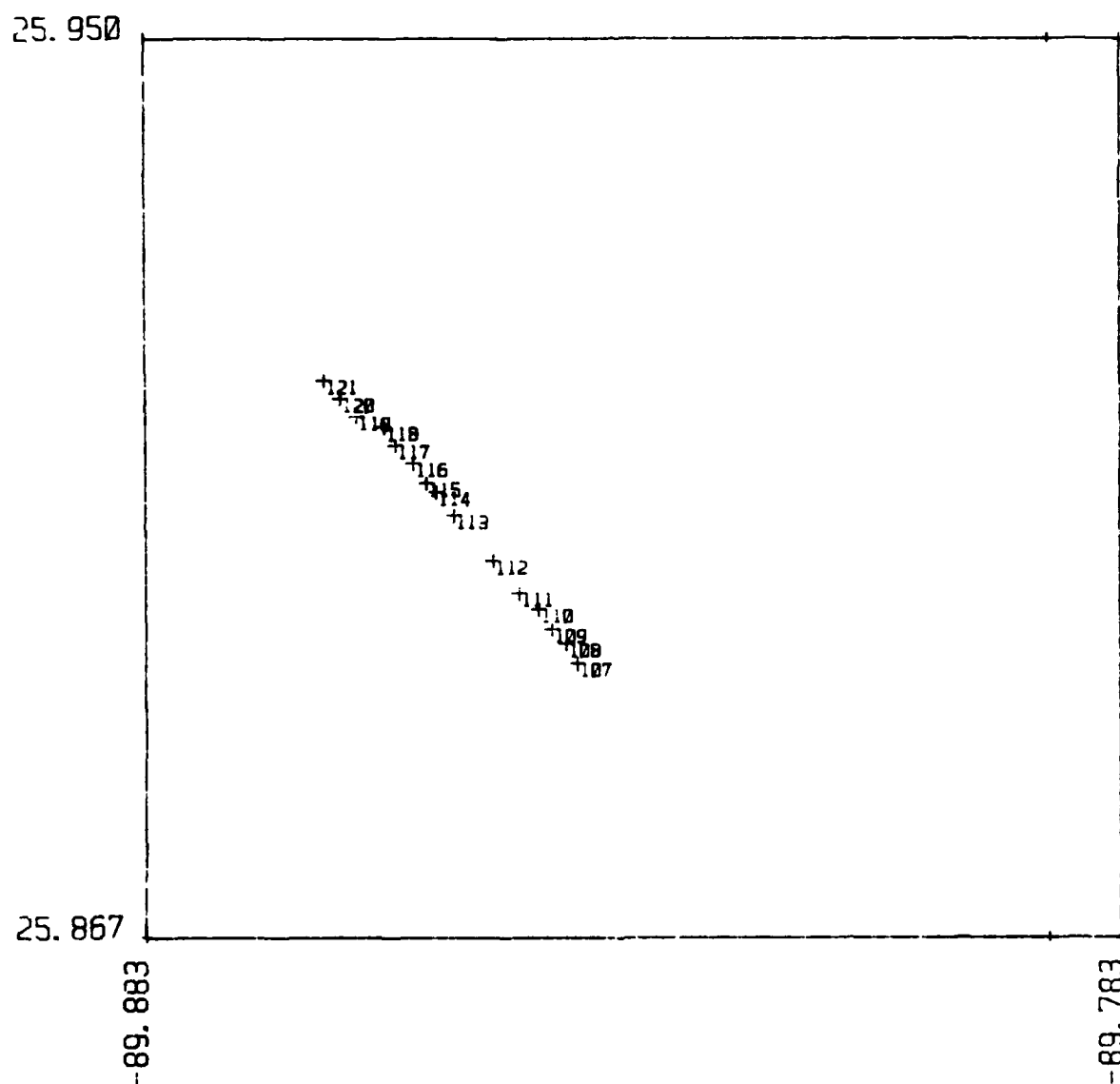


Figure 9.

ATOM '79 RECOVERY CRUISE

CTD POSITIONS-ALL STATIONS

JANUARY, 1980

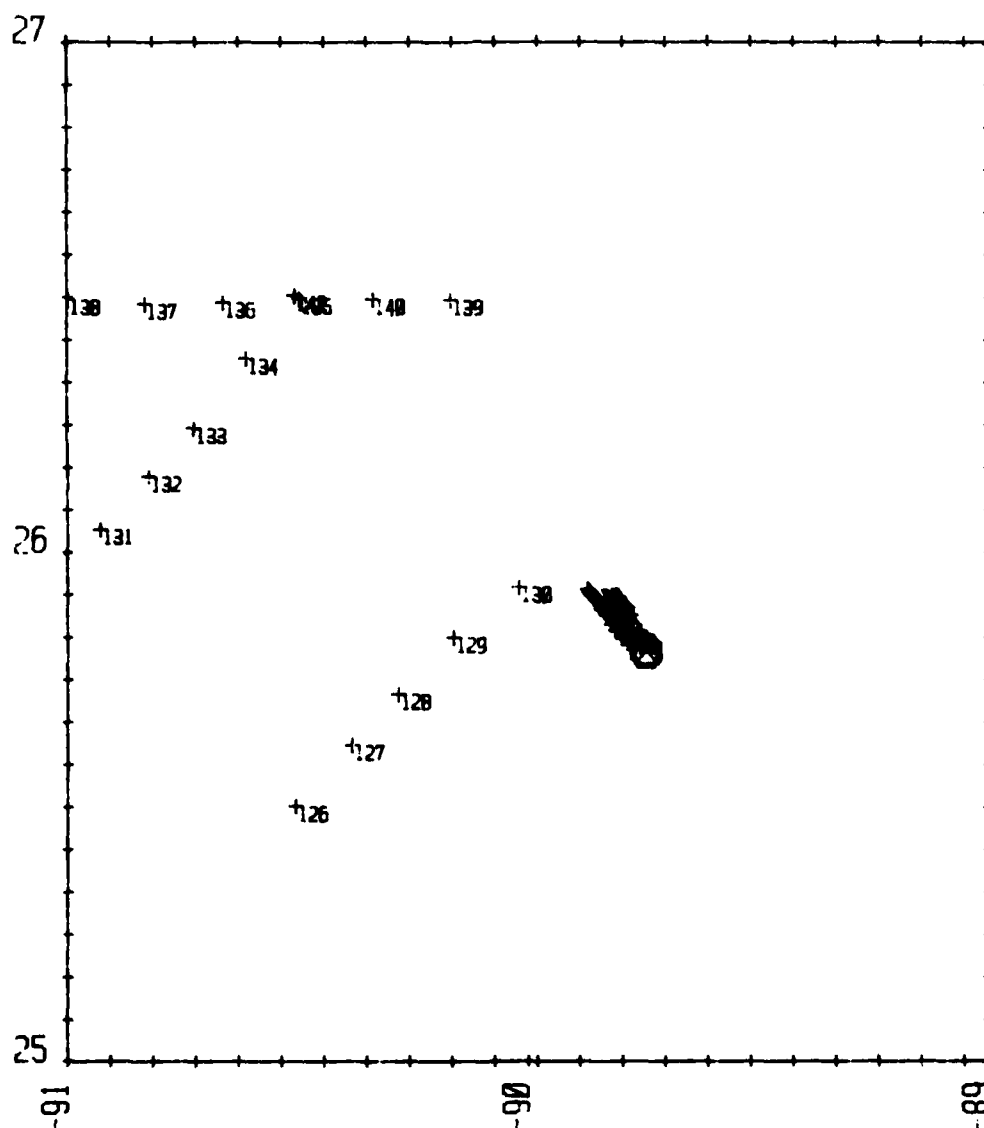


Figure 10.

ATOM '79 DEPLOYMENT CRUISE

SHEAR PROBE POSITIONS

December , 1979

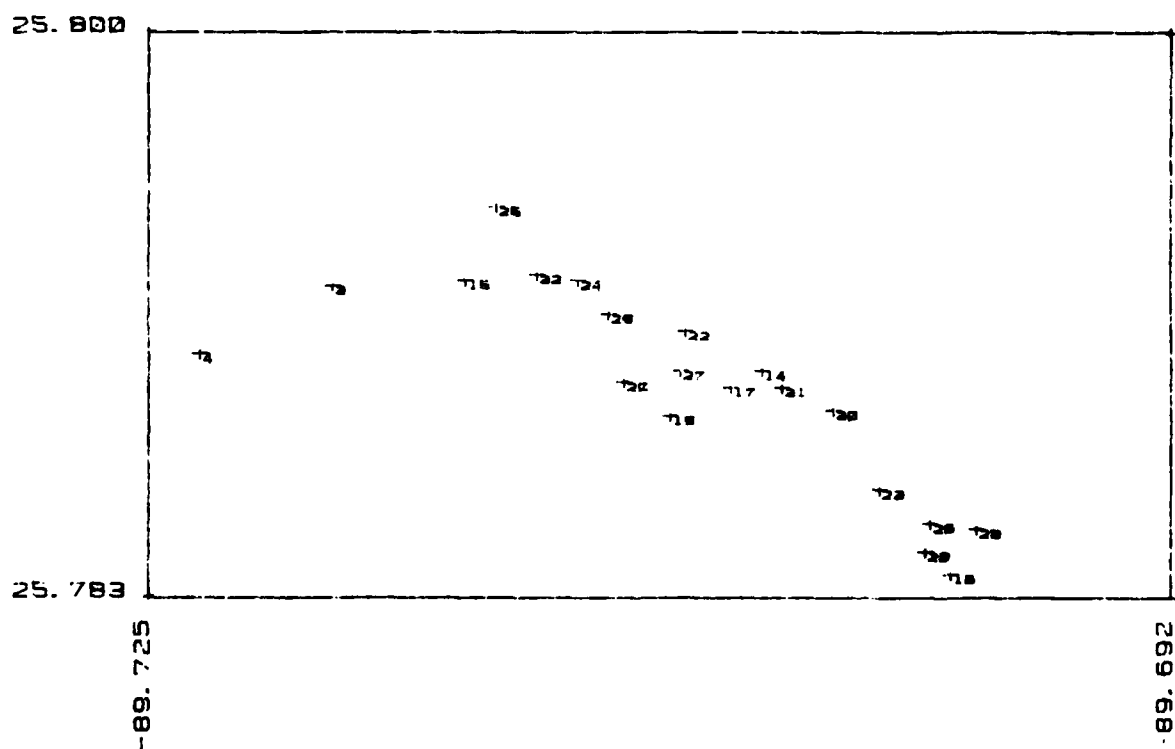


Figure 11.

ATOM '79 DEPLOYMENT CRUISE

SHEAR PROBE POSITIONS

DECEMBER, 1979

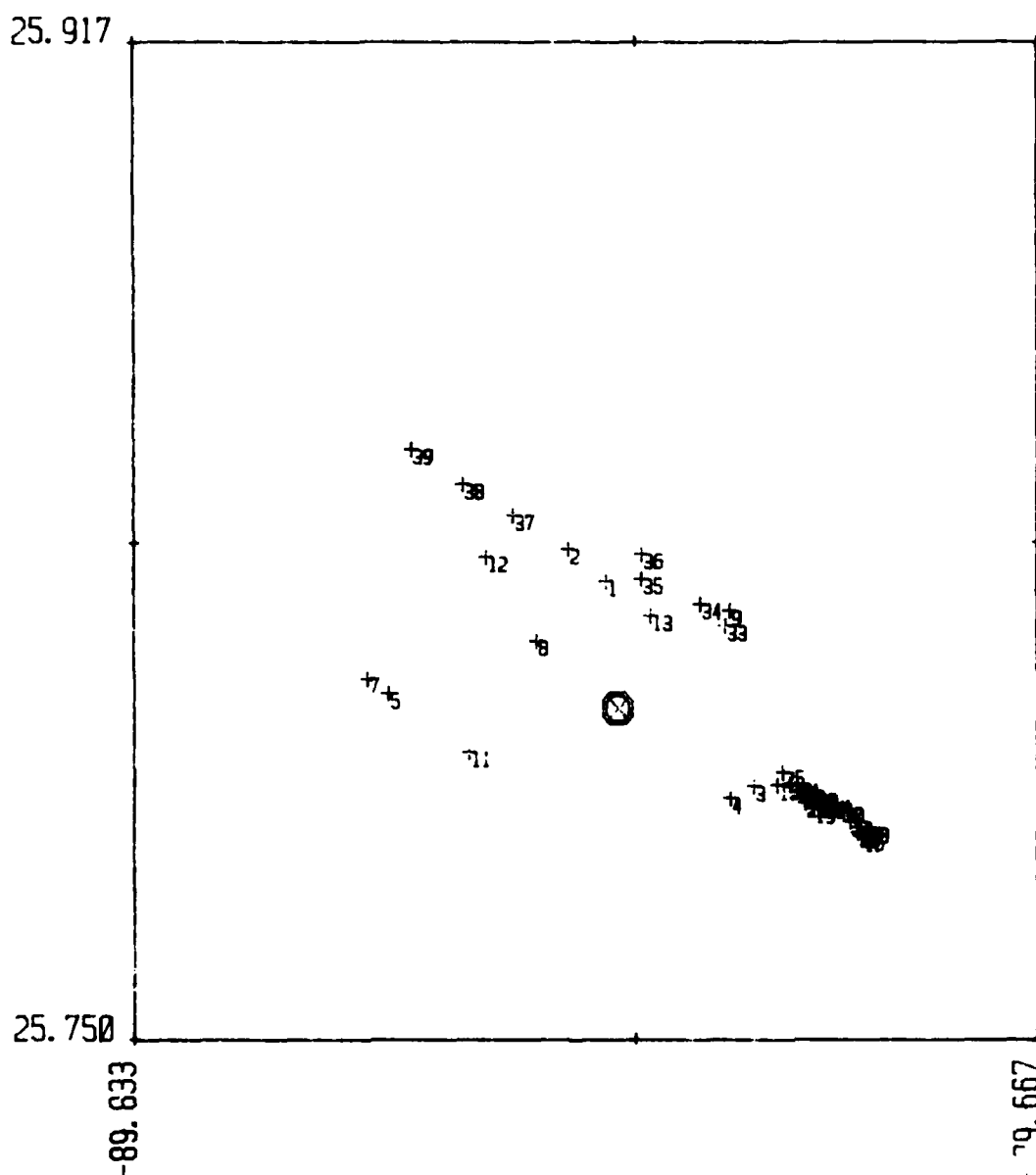


Figure 12.

ATOM '79 DEPLOYMENT CRUISE

SHEAR PROBE POSITIONS

DECEMBER, 1979

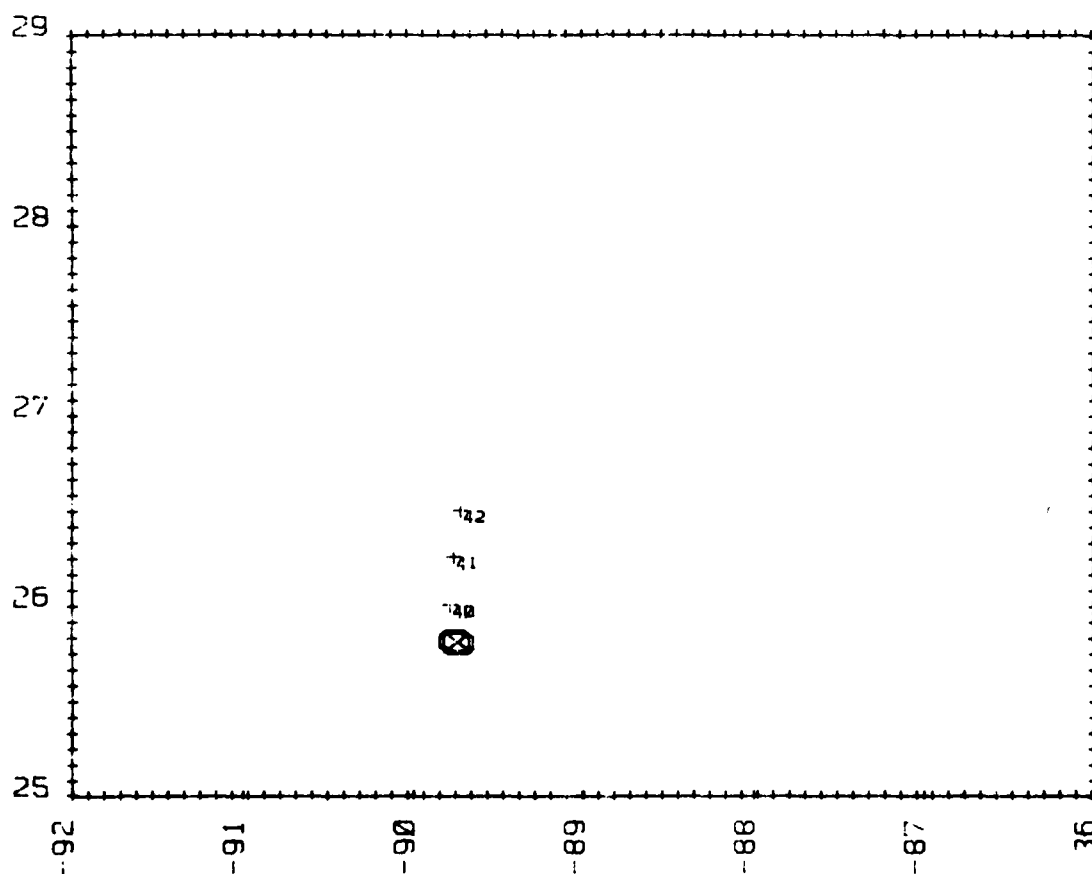


Figure 13.

3.0 CURRENT METER DATA (Figure 14)

FINAL CONFIGURATION FOR ATOM '79

(Acoustically Tracked Oceanographic Mooring)

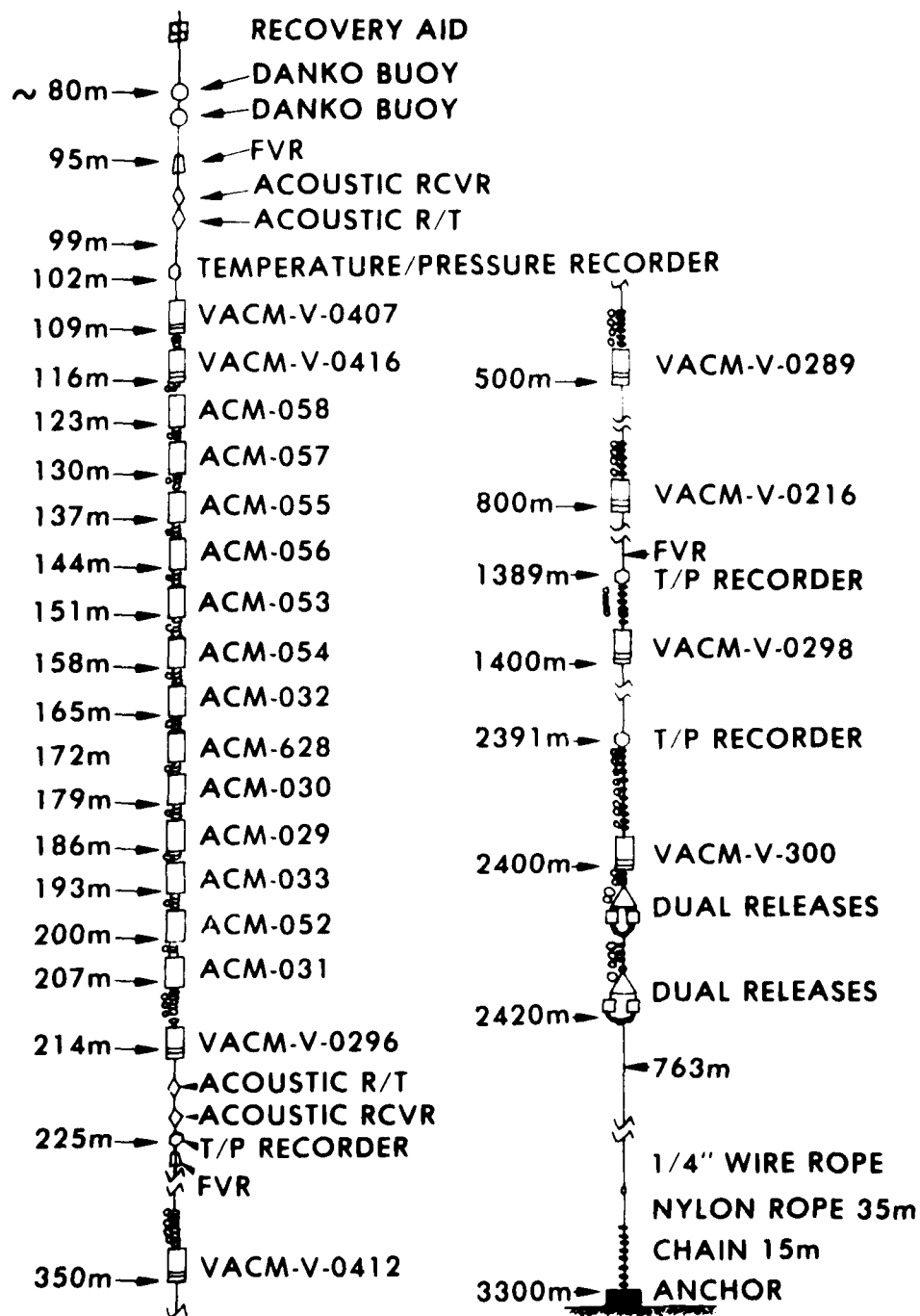


Figure 14.

3.1 Vector Averaging Current Meters

3.1.1 Current Histograms and Statistics (Figures 15-29)

3.1.2 Current Time Series (Figures 30-63)

3.1.3 Temperature Time Series (Figures 64-70)

3.1.4 Current Spectra (Figures 71-91)

3.1.5 Temperature Spectra (Figures 92-98)

FILE: VACMF		ARCAY: A10M70		LATITUDE: 25-206																	
METER: 200432		SIAL: 1		LONGITUDE: -57.7442																	
DEPTH: 100																					
2-10					0																
13-20					0																
20-30					0																
30-40					0																
40-50					0																
50-60					0																
60-70					0																
70-80					0																
80-90					0																
90-100					0																
100-110					0																
110-120					0																
120-130					0																
130-140					0																
140-150					0																
150-160					0																
160-170					0																
170-180					0																
180-190					0																
190-200					0																
200-210					0																
210-220					0																
220-230					0																
230-240					0																
240-250					0																
250-260					0																
260-270					0																
270-280					0																
280-290					0																
290-300					0																
300-310					0																
310-320					0																
320-330					0																
330-340					0																
340-350					0																
350-360					0																
SPEED	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
SUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PER CL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF ZERO SPEEDS																					
TOTAL NUMBER OF CES																					
SPACE SCALAR SPEED																					
STANDARD DEVIATION																					
TOP MEAN SPEED																					
REL FOR MEAN DIRECTION																					
PERCENTAGE ZERO SPEEDS																					
MAXIMUM/MINIMUM U																					
MAXIMUM/MINIMUM V																					
MAXIMUM SPEED																					
DIRECTION OF MAX SPD																					
DEGREES TRUE																					

Figure 15.

FILE: VACMF	ARRAY: ATCM79	LATITUDE: 25.436
MEIER: 000416	START:	LONGITUDE: -89.7442
DEPTH: 116	END:	
3-10	21 32 98 516 327 308 19	0 0
13-20	16 156 160 142 538 1620 378 126	0 0
23-30	39 55 472 368 313 640 246 18	0 0
30-40	90 59 87 510 1149 696 551 301 58	0 0
40-50	3 63 225 953 1882 1180 870 1381 410	0 0
50-60	23 285 940 1279 617 2463 3766 1715 349	0 0
63-70	4 98 166 230 243 1697 2607 1569 38	0 0
73-80		0 0
83-90		0 0
90-100		0 0
100-110		0 0
110-120		0 0
120-130		0 0
130-140		0 0
140-150		0 0
150-160		0 0
160-170		0 0
170-180		0 0
180-190		0 0
190-200		0 0
200-210		0 0
210-220		0 0
220-230		0 0
230-240		0 0
240-250		0 0
250-260		0 0
260-270		0 0
270-280		0 0
280-290		0 0
290-300		0 0
300-310		0 0
310-320		0 0
320-330		0 0
330-340		0 0
340-350		0 0
350-360		0 0
SPEED	0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100	
SUM	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	190
PER CT	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	35999
NUMBER OF ZERO SPEEDS	1	
TOTAL NUMBER OF OBS	36000	
AVERAGE SCALAR SPEED	51.19 CM/SEC	
SI "ARD DEVIATION	8.58 CM/SEC	
VE P MEAN SPEED	48.92 CM/SEC	
VEL OR MEAN DIRECTION	298.80 DEGREES TRUE	
	MAXIMUM/MINIMUM U	0.00 CM/SEC
	MAXIMUM/MINIMUM V	52.94 CM/SEC
	MAXIMUM SPEED	122.43 CM/SEC
	DIRECTION OF MAX SPD	246.88 DEGREES TRUE

Figure 16.

FILE: VACMF		ARRAY: ATOM79		LATITUDE: 25.506	
METER: 000006		STAR: 1		LONGITUDE: -69.7442	
DEPTH: 214		FNO: 1			
2-10					1
10-20					0
20-30					0
30-40					0
40-50					1
50-60					0
60-70					0
70-80					0
80-90					0
90-100					0
100-110					0
110-120					0
120-130					0
130-140					0
140-150					0
150-160					0
160-170					0
170-180					0
180-190					0
190-200					0
200-210					0
210-220					0
220-230					0
230-240					0
240-250					0
250-260					0
260-270					0
270-280					0
280-290					0
290-300					0
300-310					0
310-320					0
320-330					0
330-340					0
340-350					0
350-360					0
SUM					1
PERCENT					100
NUMBER OF ZERO SPEEDS					0
TOTAL NUMBER OF OBS					1000
AVERAGE SCALAR SPEED					40.52 CM/SEC
ANDARD DEVIATION					6.00 CM/SEC
TOP MEAN SPEED					36.39 CM/SEC
VECTOR MEAN DIRECTION					102.03 DEGREES TRUE
PERCENTAGE ZERO SPEEDS					0.0
MAXIMUM/MINIMUM U					0.0 CM/SEC
MAXIMUM/MINIMUM V					2.44 CM/SEC
MAXIMUM SPEED					274.10 CM/SEC
DIRECTION OF MAX SPD					0.0 DEGREES TRUE

Figure 17.

FILE: VACMF		ARRAY: ATOM79		LATITUDE: 25.0000	
METERS: 100000		START:		LONGITUDE: -89.7442	
DEPTH: 353		END:			
10-10	0	0	0	0	0
10-20	0	0	0	0	0
20-30	0	0	0	0	0
30-40	0	0	0	0	0
40-50	0	0	0	0	0
50-60	0	0	0	0	0
60-70	0	0	0	0	0
70-80	0	0	0	0	0
80-90	0	0	0	0	0
90-100	0	0	0	0	0
100-110	0	0	0	0	0
110-120	0	0	0	0	0
120-130	0	0	0	0	0
130-140	0	0	0	0	0
140-150	0	0	0	0	0
150-160	0	0	0	0	0
160-170	0	0	0	0	0
170-180	0	0	0	0	0
180-190	0	0	0	0	0
190-200	0	0	0	0	0
200-210	0	0	0	0	0
210-220	0	0	0	0	0
220-230	0	0	0	0	0
230-240	0	0	0	0	0
240-250	0	0	0	0	0
250-260	0	0	0	0	0
260-270	0	0	0	0	0
270-280	0	0	0	0	0
280-290	0	0	0	0	0
290-300	0	0	0	0	0
300-310	0	0	0	0	0
310-320	0	0	0	0	0
320-330	0	0	0	0	0
330-340	0	0	0	0	0
340-350	0	0	0	0	0
350-360	0	0	0	0	0
SUM	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0
AVERAGE SCALAR SPEED	0	0	0	0	0
STANDARD DEVIATION	0	0	0	0	0
VECTOR MEAN SPEED	0	0	0	0	0
VECTOR MEAN DIRECTION	0	0	0	0	0
PERCENTAGE ZERO SPEEDS	0	0	0	0	0
MAXIMUM/MINIMUM U	0	0	0	0	0
MAXIMUM/MINIMUM V	0	0	0	0	0
MAXIMUM SPEED	0	0	0	0	0
DIRECTION OF MAX SPD	0	0	0	0	0
CM/SEC	0	0	0	0	0
CM/SEC	0	0	0	0	0
CM/SEC	0	0	0	0	0
DEGREES TRUE	0	0	0	0	0

Figure 18.

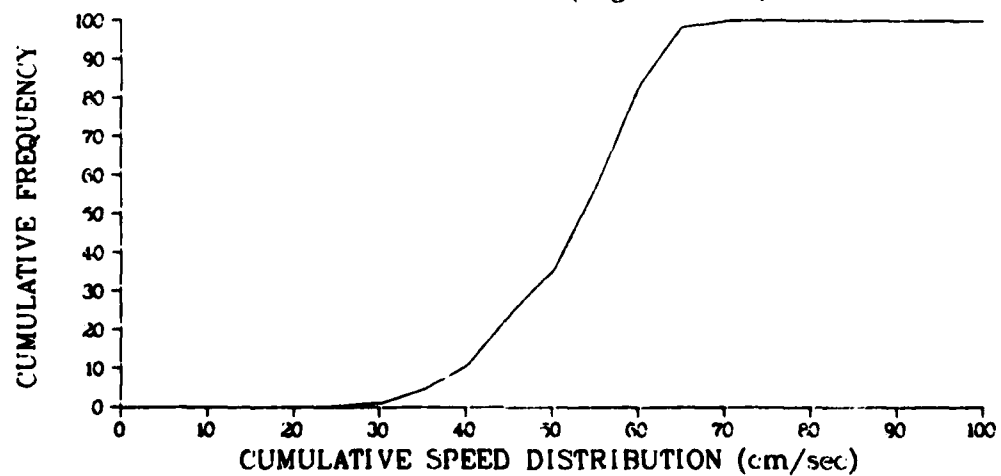
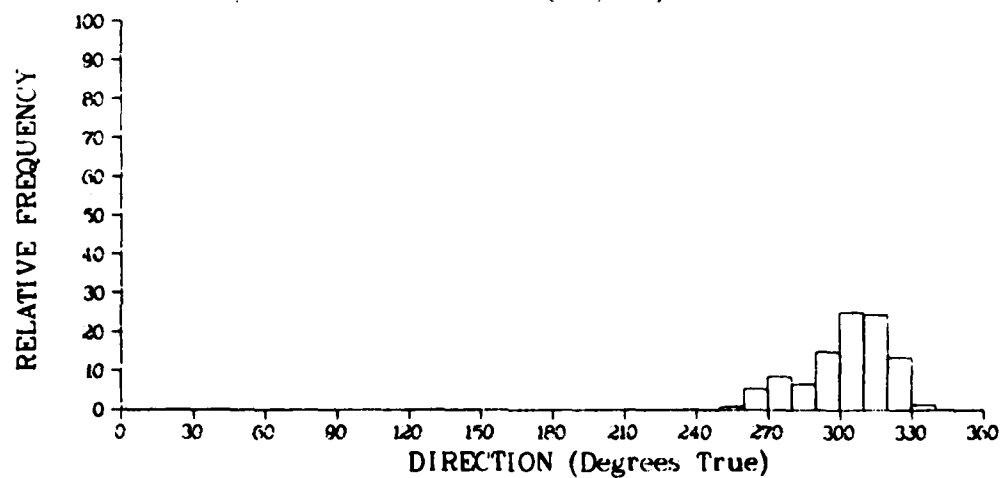
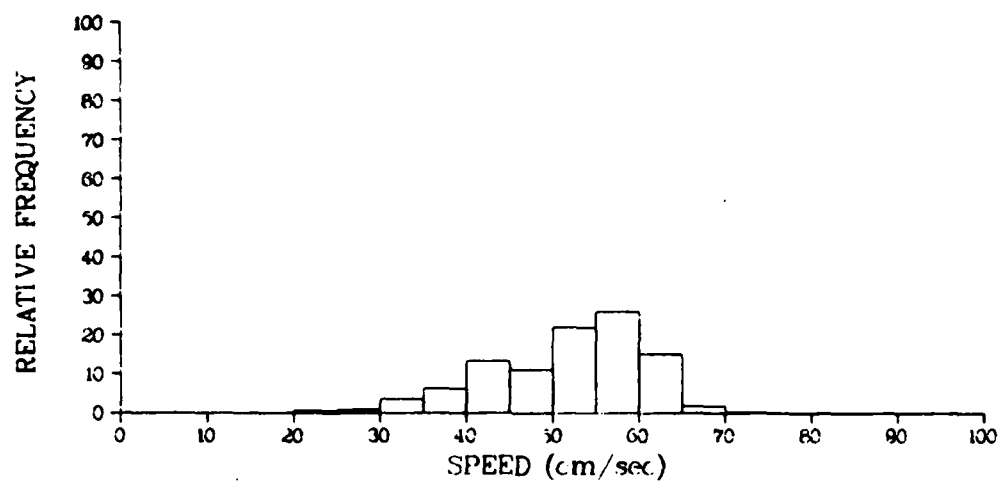
FILE: VACM		ARRAY: ATOM79		LATITUDE: 25.000	
START: 000000		END: 500		LONGITUDE: -09.7002	
2-10	10	10	10	10	10
20-30	20	20	20	20	20
30-40	30	30	30	30	30
40-50	40	40	40	40	40
50-60	50	50	50	50	50
60-70	60	60	60	60	60
70-80	70	70	70	70	70
80-90	80	80	80	80	80
90-100	90	90	90	90	90
100-110	100	100	100	100	100
110-120	110	110	110	110	110
120-130	120	120	120	120	120
130-140	130	130	130	130	130
140-150	140	140	140	140	140
150-160	150	150	150	150	150
160-170	160	160	160	160	160
170-180	170	170	170	170	170
180-190	180	180	180	180	180
190-200	190	190	190	190	190
200-210	200	200	200	200	200
210-220	210	210	210	210	210
220-230	220	220	220	220	220
230-240	230	230	230	230	230
240-250	240	240	240	240	240
250-260	250	250	250	250	250
260-270	260	260	260	260	260
270-280	270	270	270	270	270
280-290	280	280	280	280	280
290-300	290	290	290	290	290
300-310	300	300	300	300	300
310-320	310	310	310	310	310
320-330	320	320	320	320	320
330-340	330	330	330	330	330
340-350	340	340	340	340	340
350-360	350	350	350	350	350
360-370	360	360	360	360	360
370-380	370	370	370	370	370
380-390	380	380	380	380	380
390-400	390	390	390	390	390
400-410	400	400	400	400	400
410-420	410	410	410	410	410
420-430	420	420	420	420	420
430-440	430	430	430	430	430
440-450	440	440	440	440	440
450-460	450	450	450	450	450
460-470	460	460	460	460	460
470-480	470	470	470	470	470
480-490	480	480	480	480	480
490-500	490	490	490	490	490
500-510	500	500	500	500	500
510-520	510	510	510	510	510
520-530	520	520	520	520	520
530-540	530	530	530	530	530
540-550	540	540	540	540	540
550-560	550	550	550	550	550
560-570	560	560	560	560	560
570-580	570	570	570	570	570
580-590	580	580	580	580	580
590-600	590	590	590	590	590
600-610	600	600	600	600	600
610-620	610	610	610	610	610
620-630	620	620	620	620	620
630-640	630	630	630	630	630
640-650	640	640	640	640	640
650-660	650	650	650	650	650
660-670	660	660	660	660	660
670-680	670	670	670	670	670
680-690	680	680	680	680	680
690-700	690	690	690	690	690
700-710	700	700	700	700	700
710-720	710	710	710	710	710
720-730	720	720	720	720	720
730-740	730	730	730	730	730
740-750	740	740	740	740	740
750-760	750	750	750	750	750
760-770	760	760	760	760	760
770-780	770	770	770	770	770
780-790	780	780	780	780	780
790-800	790	790	790	790	790
800-810	800	800	800	800	800
810-820	810	810	810	810	810
820-830	820	820	820	820	820
830-840	830	830	830	830	830
840-850	840	840	840	840	840
850-860	850	850	850	850	850
860-870	860	860	860	860	860
870-880	870	870	870	870	870
880-890	880	880	880	880	880
890-900	890	890	890	890	890
900-910	900	900	900	900	900
910-920	910	910	910	910	910
920-930	920	920	920	920	920
930-940	930	930	930	930	930
940-950	940	940	940	940	940
950-960	950	950	950	950	950
960-970	960	960	960	960	960
970-980	970	970	970	970	970
980-990	980	980	980	980	980
990-1000	990	990	990	990	990
1000-1010	1000	1000	1000	1000	1000
1010-1020	1010	1010	1010	1010	1010
1020-1030	1020	1020	1020	1020	1020
1030-1040	1030	1030	1030	1030	1030
1040-1050	1040	1040	1040	1040	1040
1050-1060	1050	1050	1050	1050	1050
1060-1070	1060	1060	1060	1060	1060
1070-1080	1070	1070	1070	1070	1070
1080-1090	1080	1080	1080	1080	1080
1090-1100	1090	1090	1090	1090	1090
1100-1110	1100	1100	1100	1100	1100
1110-1120	1110	1110	1110	1110	1110
1120-1130	1120	1120	1120	1120	1120
1130-1140	1130	1130	1130	1130	1130
1140-1150	1140	1140	1140	1140	1140
1150-1160	1150	1150	1150	1150	1150
1160-1170	1160	1160	1160	1160	1160
1170-1180	1170	1170	1170	1170	1170
1180-1190	1180	1180	1180	1180	1180
1190-1200	1190	1190	1190	1190	1190
1200-1210	1200	1200	1200	1200	1200
1210-1220	1210	1210	1210	1210	1210
1220-1230	1220	1220	1220	1220	1220
1230-1240	1230	1230	1230	1230	1230
1240-1250	1240	1240	1240	1240	1240
1250-1260	1250	1250	1250	1250	1250
1260-1270	1260	1260	1260	1260	1260
1270-1280	1270	1270	1270	1270	1270
1280-1290	1280	1280	1280	1280	1280
1290-1300	1290	1290	1290	1290	1290
1300-1310	1300	1300	1300	1300	1300
1310-1320	1310	1310	1310	1310	1310
1320-1330	1320	1320	1320	1320	1320
1330-1340	1330	1330	1330	1330	1330
1340-1350	1340	1340	1340	1340	1340
1350-1360	1350	1350	1350	1350	1350
1360-1370	1360	1360	1360	1360	1360
1370-1380	1370	1370	1370	1370	1370
1380-1390	1380	1380	1380	1380	1380
1390-1400	1390	1390	1390	1390	1390
1400-1410	1400	1400	1400	1400	1400
1410-1420	1410	1410	1410	1410	1410
1420-1430	1420	1420	1420	1420	1420
1430-1440	1430	1430	1430	1430	1430
1440-1450	1440	1440	1440	1440	1440
1450-1460	1450	1450	1450	1450	1450
1460-1470	1460	1460	1460	1460	1460
1470-1480	1470	1470	1470	1470	1470
1480-1490	1480	1480	1480	1480	1480
1490-1500	1490	1490	1490	1490	1490
1500-1510	1500	1500	1500	1500	1500
1510-1520	1510	1510	1510	1510	1510
1520-1530	1520	1520	1520	1520	1520
1530-1540	1530	1530	1530	1530	1530
1540-1550	1540	1540	1540	1540	1540
1550-1560	1550	1550	1550	1550	1550
1560-1570	1560	1560	1560	1560	1560
1570-1580	1570	1570	1570	1570	1570
1580-1590	1580	1580	1580	1580	1580
1590-1600	1590	1590	1590	1590	1590
1600-1610	1600	1600	1600	1600	1600
1610-1620	1610	1610	1610	1610	1610
1620-1630	1620	1620	1620	1620	1620
1630-1640	1630	1630	1630	1630	1630
1640-1650	1640	1640	1640	1640	1640
1650-1660	1650	1650	1650	1650	1650
1660-1670	1660	1660	1660	1660	1660
1670-1680	1670	1670	1670	1670	1670
1680-1690	1680	1680	1680	1680	1680
1690-1700	1690	1690	1690	1690	1690
1700-1710	1700	1700	1700	1700	1700
1710-1720	1710	1710	1710	1710	1710
1720-1730	1720	1720	1720	1720	1720
1730-1740	1730	1730	1730	1730	1730
1740-1750	1740	1740	1740	1740	1740
1750-1760	1750	1750	1750	1750	1750
1760-1770	1760	1760	1760	1760	1760
1770-1780	1770	1770	1770	1770	1770
1780-1790	1780	1780	1780	1780	1780
1790-1800	1790	1790	1790	1790	1790
1800-1810	1800	1800	1800	1800	1800
1810-1820	1810	1810	1810	1810	1810
1820-1830	1820	1820	1820	1820	1820
1830-1840	1830	1830	1830	1830	1830
1840-1850	1840	1840	1840	1840	1840
1850-1860	1850	1850	1850	1850	1850
1860-1870	1860	1860	1860	1860	1860
1870-1880	1870	1870	1870	1870	1870
1880-1890	1880	1880	1880	1880	1880
1890-1900	1890	1890	1890	1890	1890
1900-1910	1900	1900	1900	1900	1900
1910-1920	1910	1910	1910	1910	1910
1920-1930	1920	1920	1920	1920	1920
1930-1940	1930	1930	1930	1930	1930
1940-1950	1940	1940	1940	1940	1940
1950-1960	1950	1950	1950	1950	1950
1960-1970	1960	1960	1960	1960	1960
1970-1980	1970	1970	1970	1970	1970
1980-1990	1980	1980	1980	1980	1980
1990-2000	1990	1990	1990		

FILE: VACMF										ARRAY: ATOM79											
MEAN: 000200										STAG: 14											
DEPTH: 1400										END:											
LATITUDE: 25.936										LONGITUDE: -85.7442											
2-10	4	118								122	1.6										
10-20	113	141								254	1.3										
20-30	442	67								529	2.8										
30-40	35	367								422	2.2										
40-50	1	317								318	1.7										
50-60	46									46	0.2										
60-70	339	94								433	2.3										
70-80	253	24								323	1.2										
80-90	316	67								383	2.0										
90-100	128	172								160	1.8										
100-110	86	354								444	2.3										
110-120	127	225								352	1.8										
120-130	73	220								293	1.5										
130-140	140	38								174	0.8										
140-150	175	121								296	1.5										
150-160	59	171								230	1.2										
160-170	55	215	30							551	2.9										
170-180	13	343	344	336						1010	5.3										
180-190	137	313	53	468	94					1065	5.5										
190-200	23	488	5	345	78					934	4.9										
200-210		274	192	714	948	60				2187	11.4										
210-220		38	54	304	228	171				881	4.6										
220-230		16	247	42						311	1.6										
230-240		31	84							115	0.6										
240-250		10	205							215	1.1										
250-260		12	90							123	0.3										
260-270	4	232	198							424	2.2										
270-280	6	94	121							225	1.2										
280-290		16	77							93	0.5										
290-300		140	50							150	0.8										
300-310		208	67	58						333	1.7										
310-320		28	242	116						206	2.0										
320-330		7	284	222						513	2.7										
330-340		20	49	193	192	459				863	4.5										
340-350		1	378	910	850	194				2824	14.7										
350-360		7	608	281	33					1009	5.3										
SUM	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
PER CT	36	3370	4906	2734	3525	2532	1504	607	0	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF ZERO SPEEDS	2	12	2	25	0	14	2	18	4	13	2	7	4	1	0	0	0	0	0	0	0
TOTAL NUMBER OF OBS.	19200																				
A PAGE SCALAR SPEED	18.38	CM/SEC																			
5 PAGE SCALAR SPEED	0.23	CM/SEC																			
VECTOR MEAN SPEED	4.17	CM/SEC																			
VECTOR MEAN DIRECTION	276.43	DEGREES TRUE																			
PERCENTAGE ZERO SPEEDS	0.0																				
MAXIMUM/MINIMUM U	12.15	CM/SEC																			
MAXIMUM/MINIMUM V	35.03	CM/SEC																			
MAXIMUM SPEED	37.65	CM/SEC																			
DIRECTION OF MAX SPD	330.73	DEGREES TRUE																			

Figure 20.

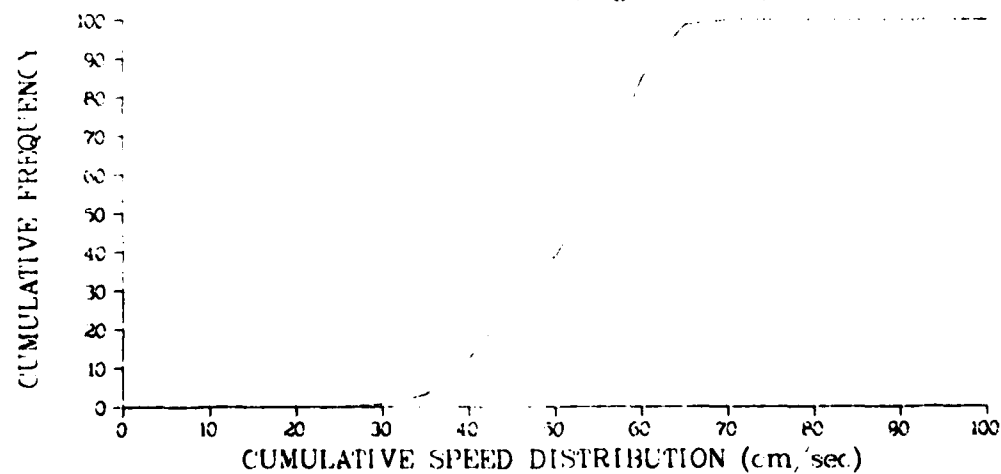
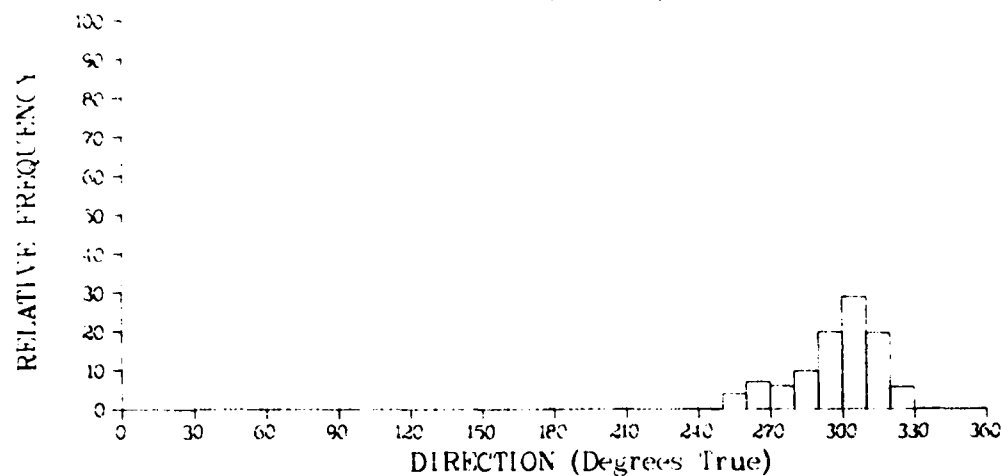
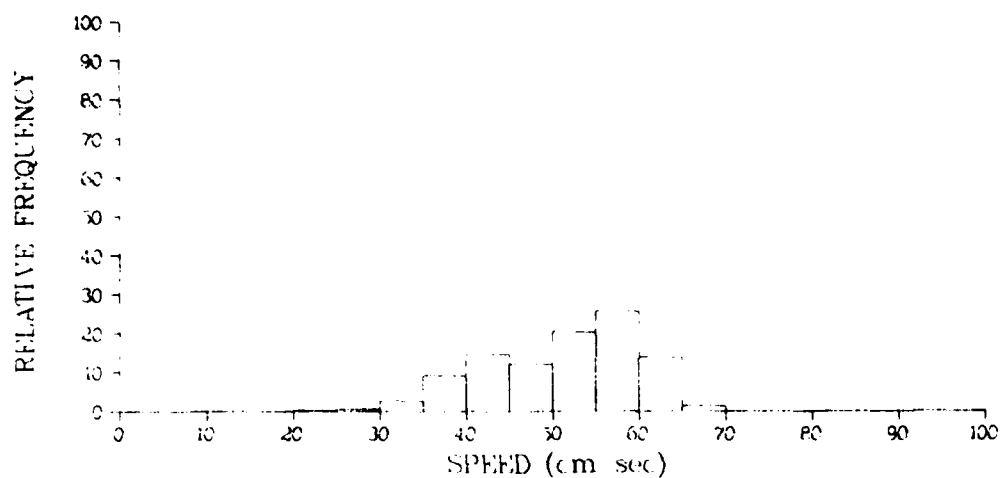
FILE: VACME		ACRA: A10M70		LATITUDE: 2-5-06	
METER POSITION		STATION		LONGITUDE: -99.7442	
DEFIN: 2400		FNO:			
2-10	62 105			187	1.0
13-25	225 246			501	2.6
7-30	48 275			253	1.3
30-40	16 40			100	1.0
40-50	79 137			58	3.0
50-60	106 40			276	1.4
60-70	31			61	1.3
70-80	122 248			275	2.0
80-90	194 364			558	1.9
90-100	132 277			249	1.8
100-110	124 324			474	2.5
110-120	10 338			152	1.8
120-130	93 53			147	1.8
130-140	82 124			264	1.4
140-150	299			298	1.6
150-160	100			223	1.2
160-170	312 167 77			747	1.9
170-180	516 37 406 126			1223	1.6
180-190	316 31 251 226			504	1.2
190-200	370 104 102 131			1106	1.8
200-210	12 171 202 383 1242			2770	10.8
210-220	155 361 105 12			633	1.3
220-230	178 96			274	1.4
230-240	70			20	1.0
240-250	68 119			187	1.0
250-260	514 163			622	2.5
260-270	45 226			251	1.3
270-280	63 14			24	1.0
280-290	47			47	1.2
290-300	69			60	1.8
300-310	28 19			47	1.2
310-320	174 264 104			864	1.2
320-330	171 229 112			512	2.7
330-340	260 454 1076 143			1114	14.2
340-350	514 126			642	3.3
350-360	616 126			246	1.1
SPEED					
SUM	0 1729 6215 2671 3306 2608 2362 45	0 45 50 55 60 65 70 75 80 85 90 95 100	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	19200
NUMBER OF ZERO SPEEDS					
PERCENTAGE ZERO SPEEDS					
TOTAL NUMBER OF 005%					
AVERAGE SCALAR SPEED					
MINIMUM DEVIATION					
V TOP MEAN SPEED					
V 30 MEAN DEVIATION					
MAXIMUM/MINIMUM U					
MAXIMUM/MINIMUM V					
MAXIMUM SPEED					
DIRECTION OF MAX SPEED					
MAXIMUM CM/SEC					
MINIMUM CM/SEC					
DIRECTION OF MIN CM/SEC					

Figure 21.



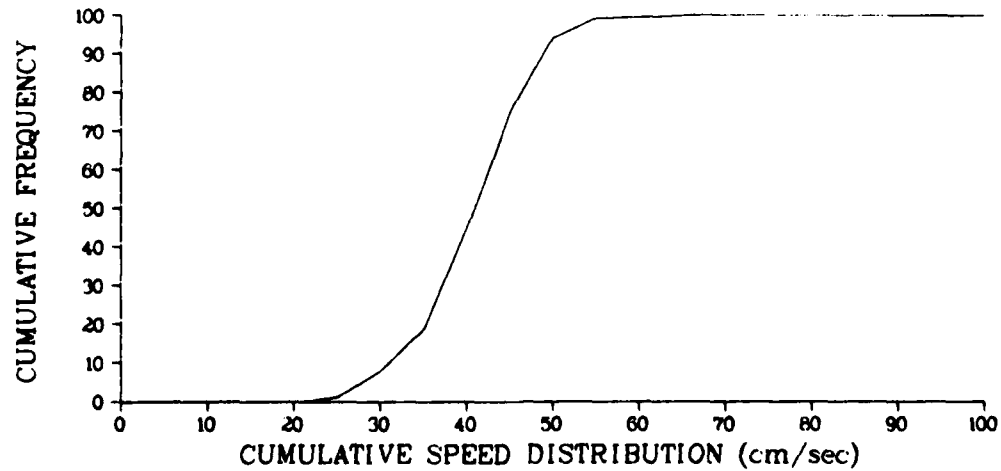
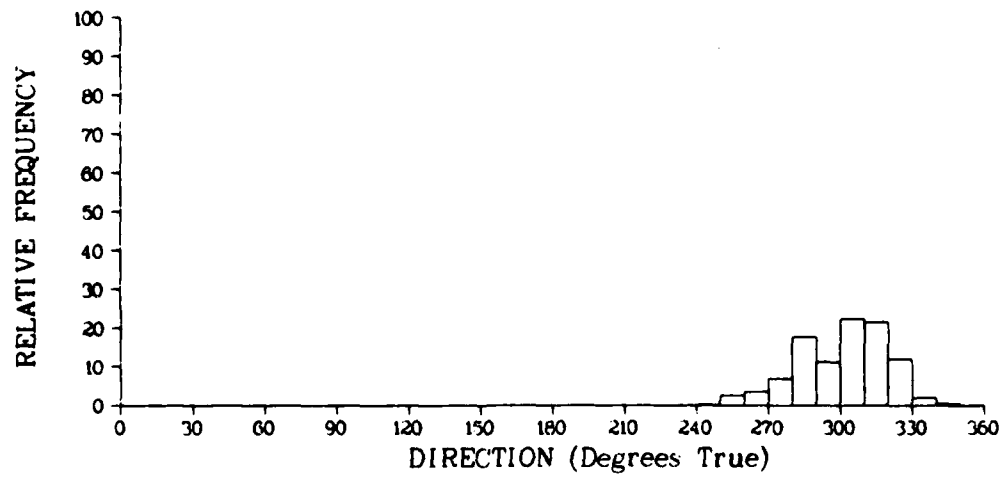
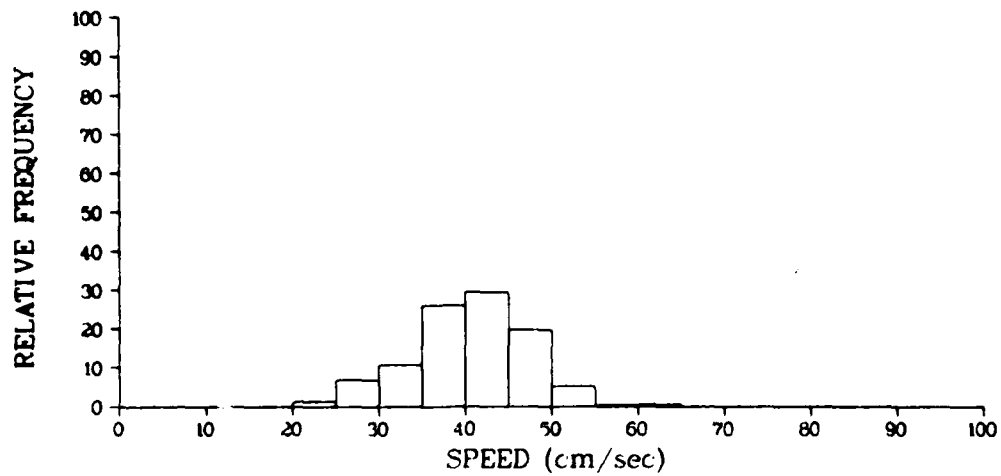
File	VACMF	Array	ATOM79
Meter	000407	Depth	100
Latitude	25806	Start	
Longitude	-89742	End	

Figure 22.



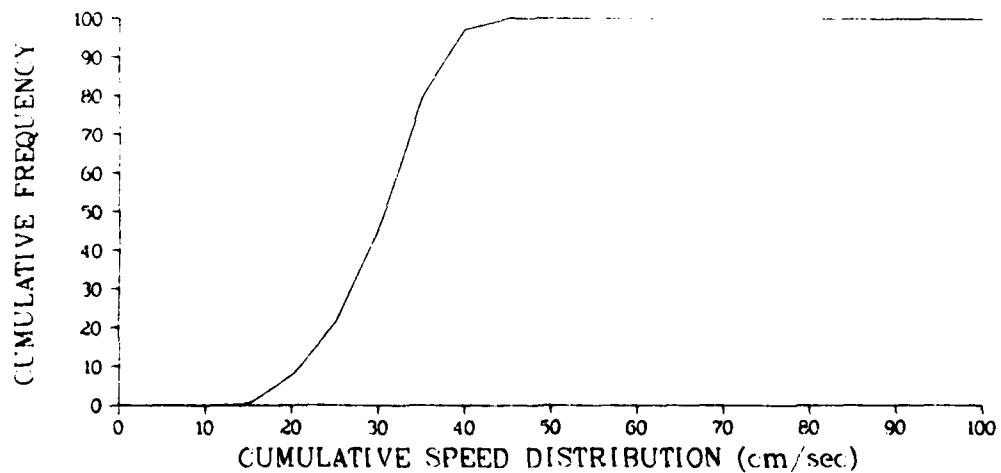
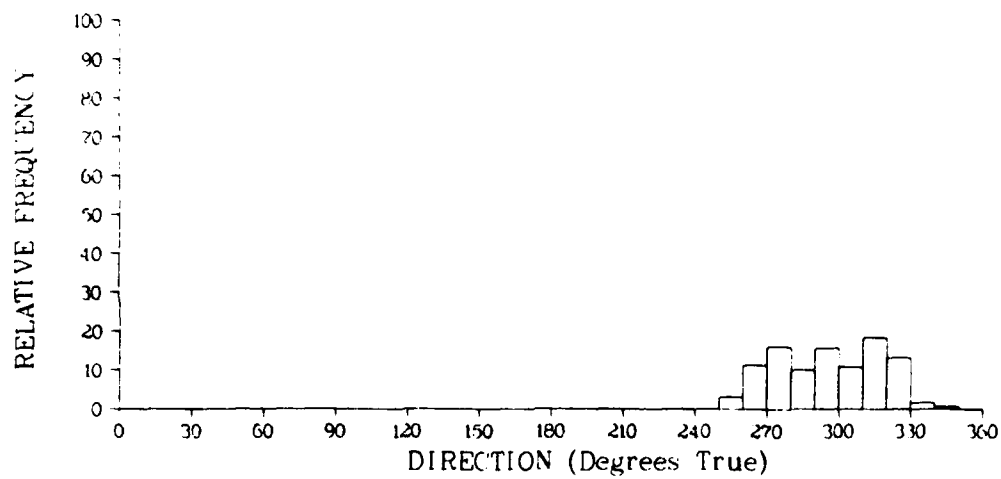
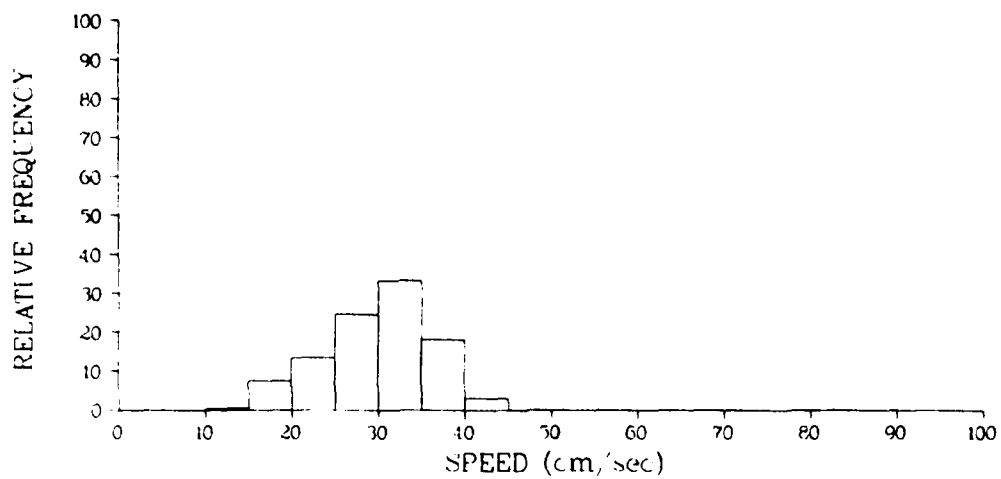
File	VACMF	Array	ATOM79
Meter	000416	Depth	116
Latitude	25.806	Start	
Longitude	-89.742	End	

Figure 23.



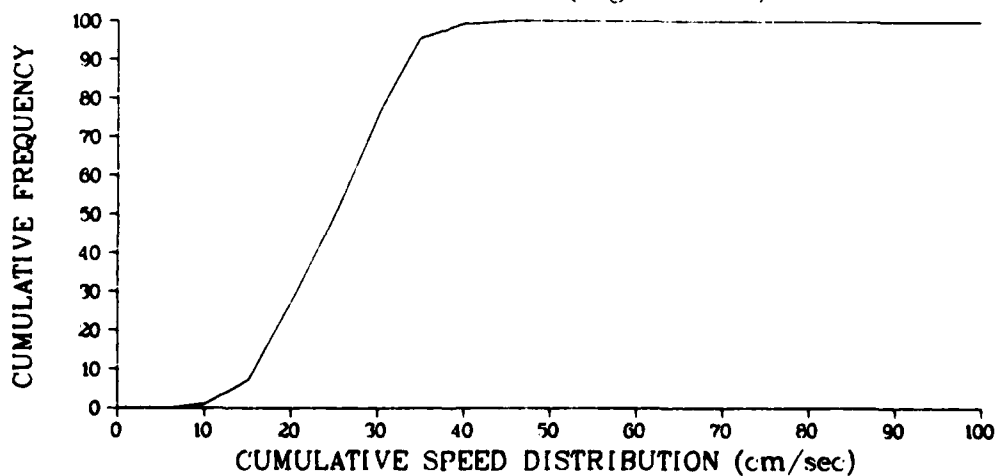
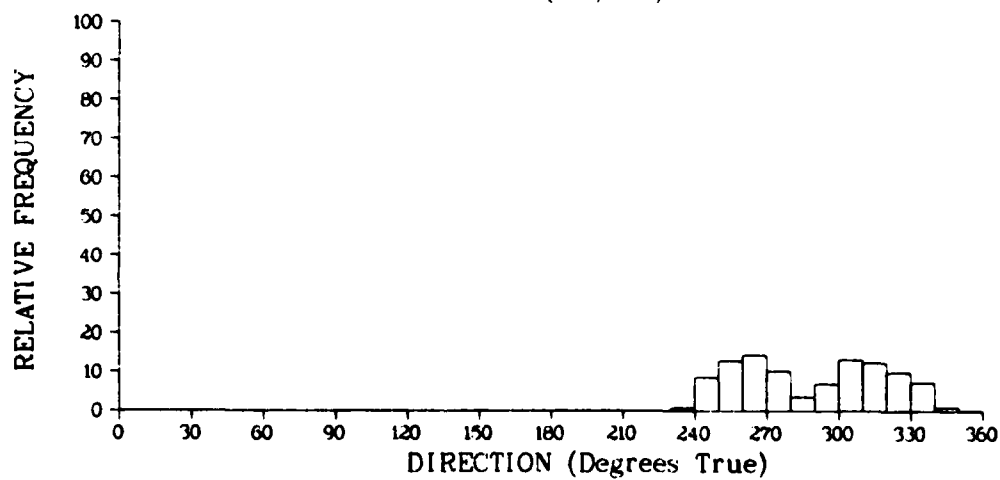
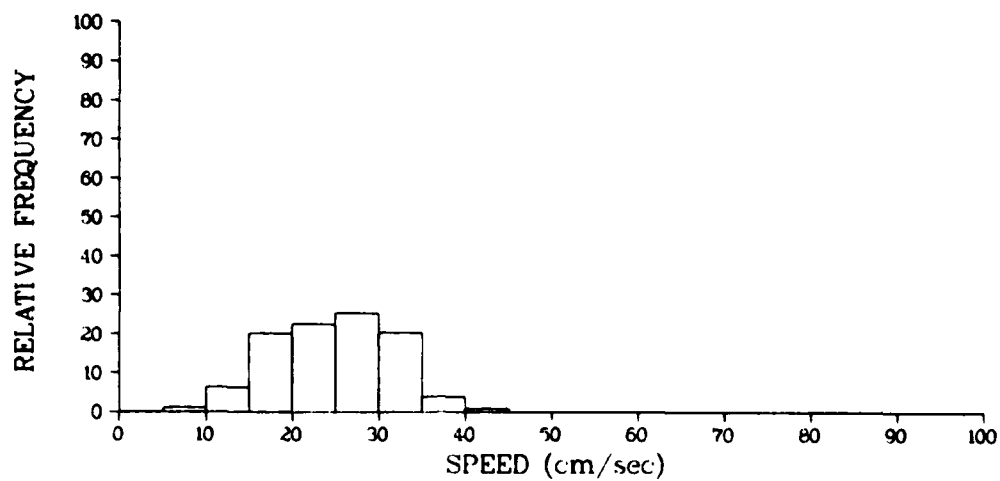
File	VACMF	Array	ATOM79
Meter	000296	Depth	214
Latitude	25.806	Start	
Longitude	-89.7442	End	

Figure 24.



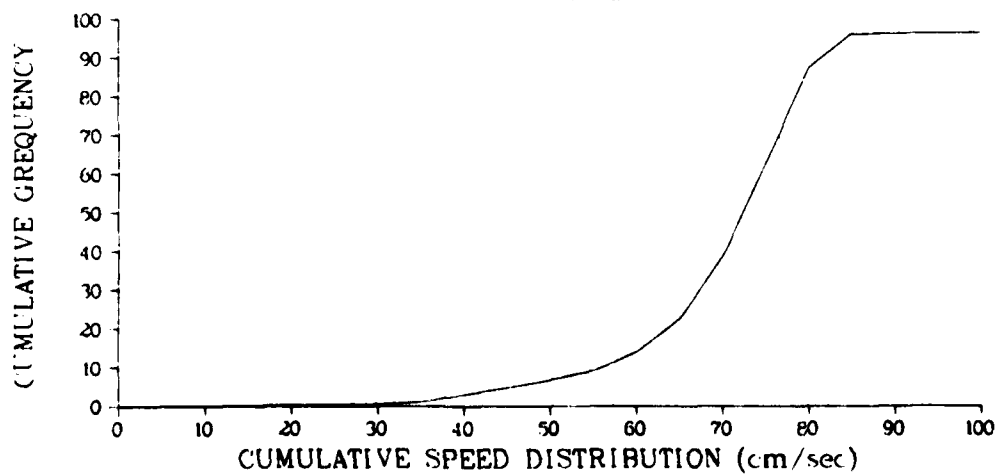
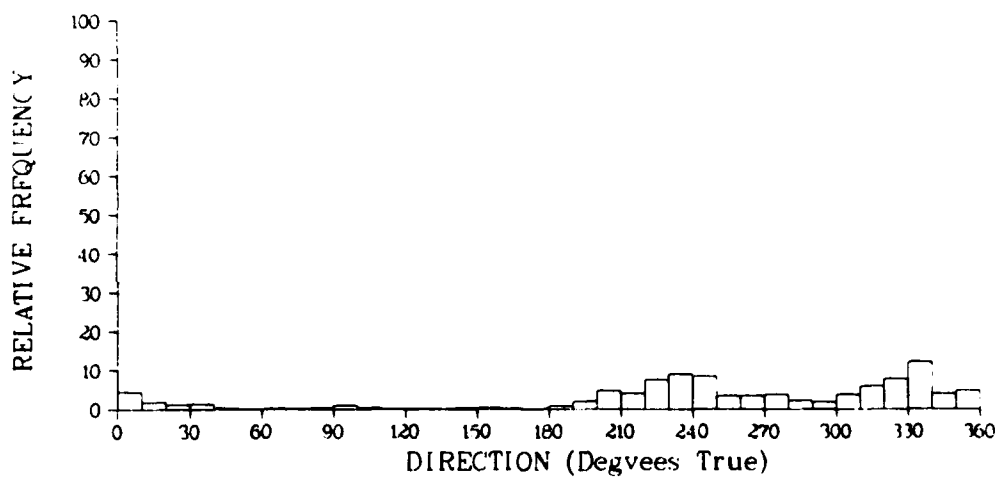
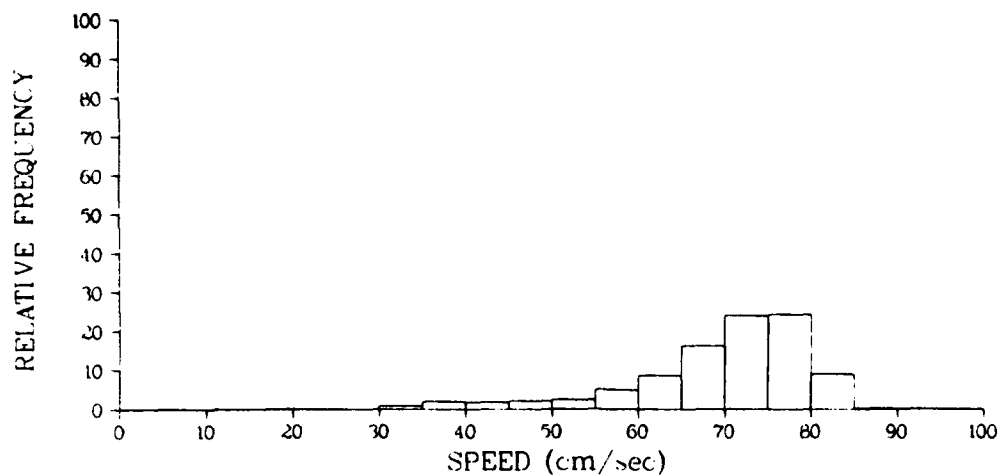
File	VACMF	Array	ATOM79
Meter	000412	Depth	350
Latitude	25 806	Start	
Longitude	-89 742	End	

Figure 25.



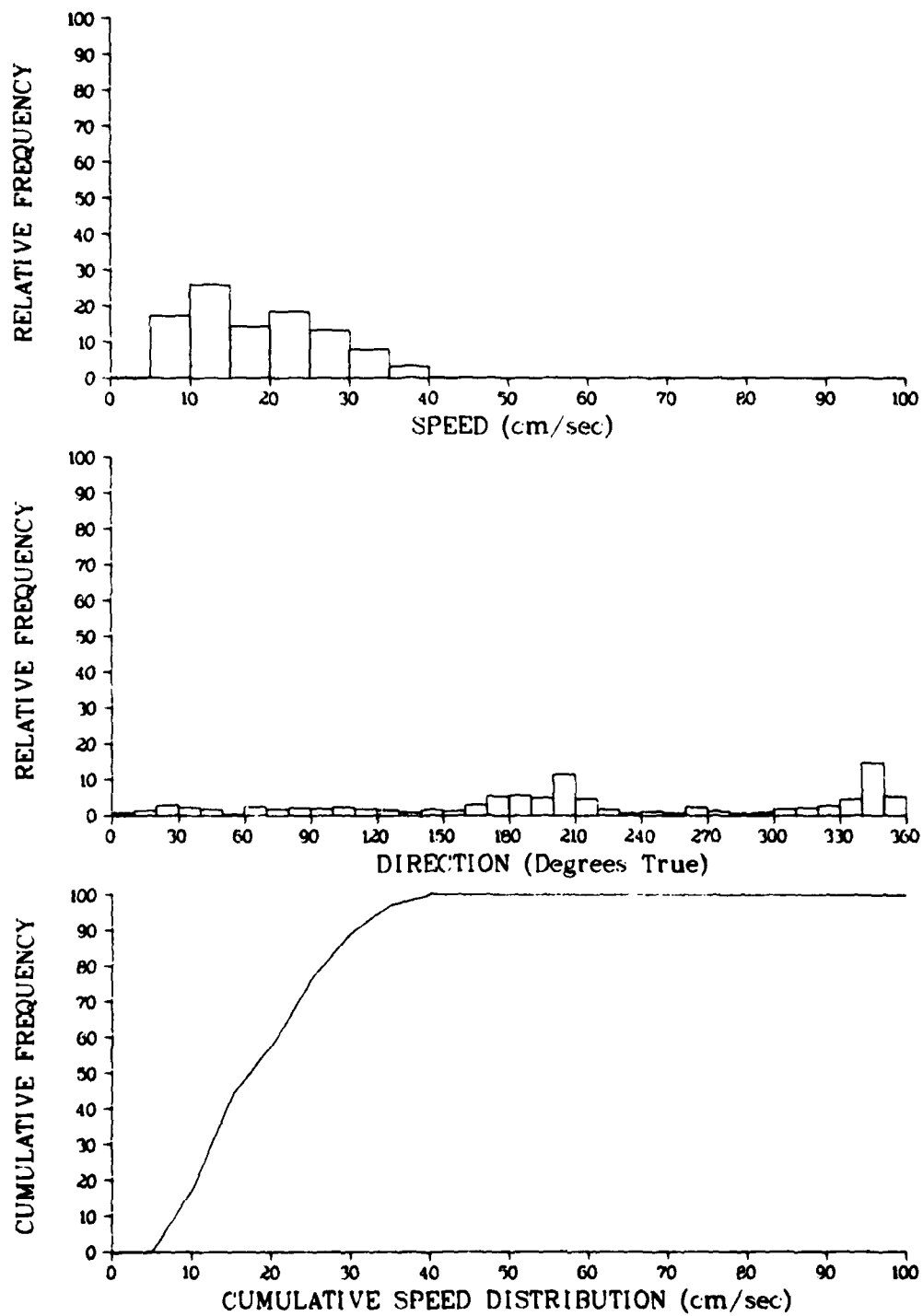
File	VACMF	Array	ATOM79
Meter	000289	Depth	500
Latitude	25 806	Start	
Longitude	-89 742	End	

Figure 26.



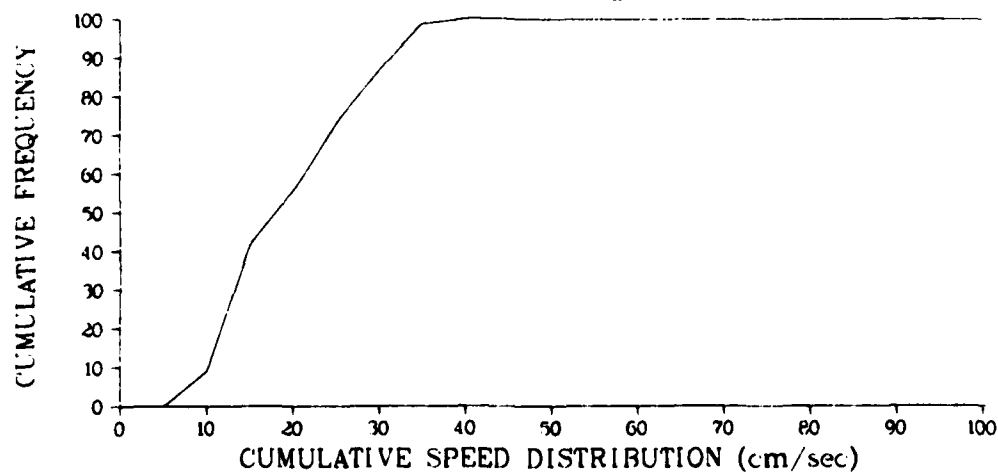
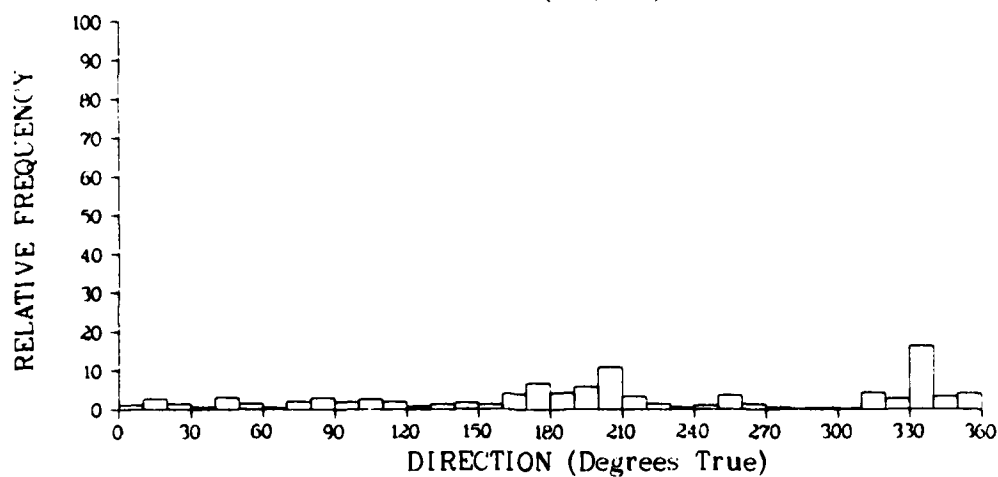
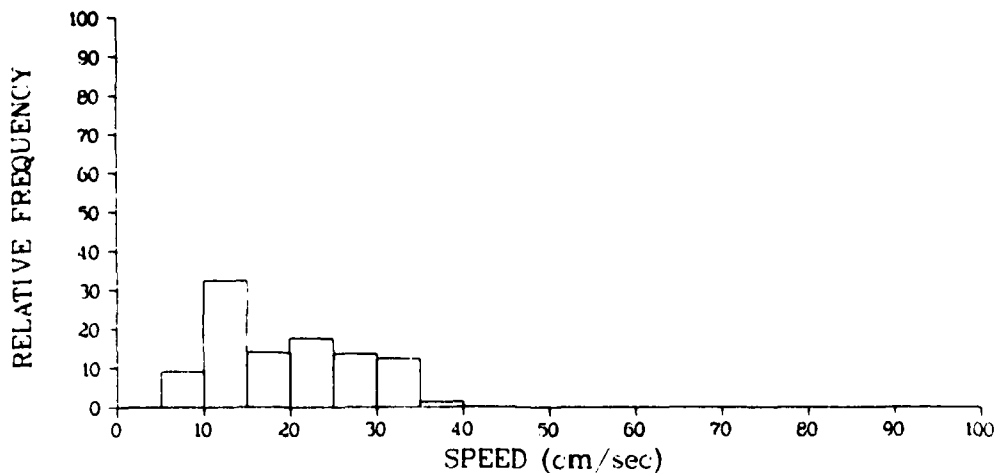
File	VACMF	Array	ATOM79
Metet	000217	Depth	800
Latitude	25 806	Start	a
Longitude	-89 742	End	

Figure 27.



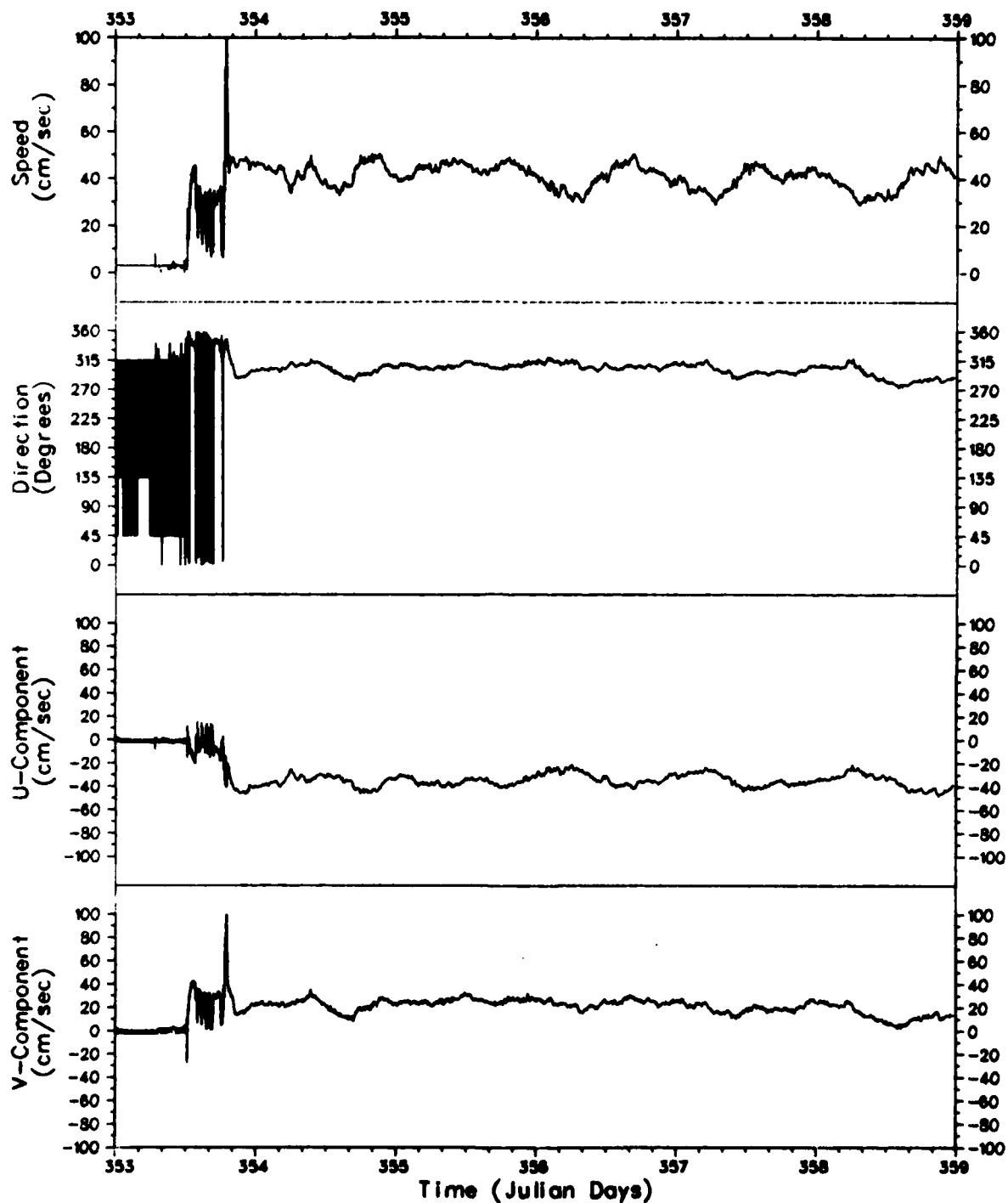
File	VACMF	Array	ATOM79
Meter	000298	Depth	1400
Latitude	25 806	Start	
Longitude	-89 742	End	

Figure 28.



File	VACMF	Array	ATOM79
Meter	000300	Depth	2400
Latitude	25 806	Start	
Longitude	-89 742	End	

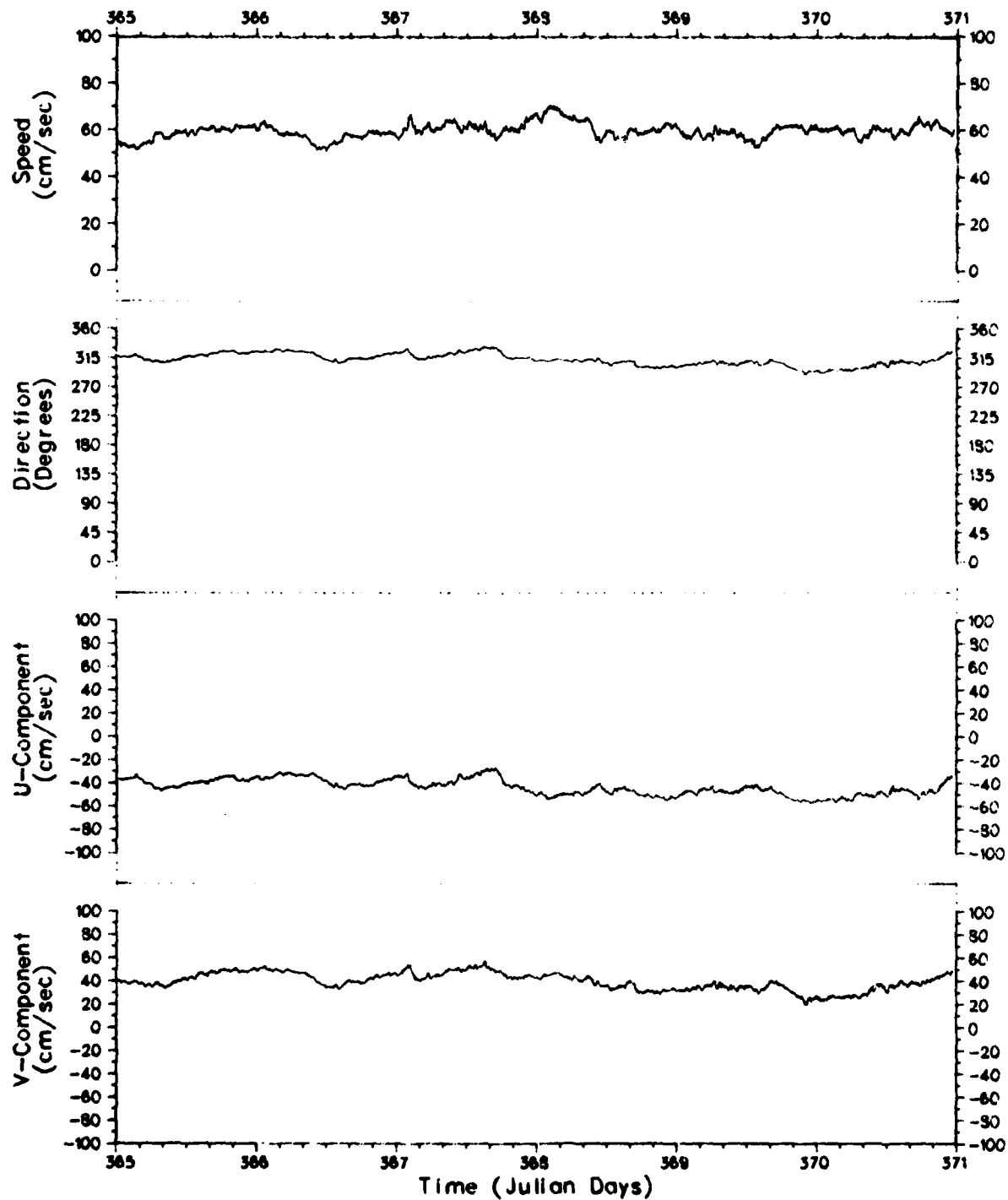
Figure 29.



File : VACMF
 Meter : 000407
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 100
 Start : 19 DEC 1979
 End : 14 JAN 1980

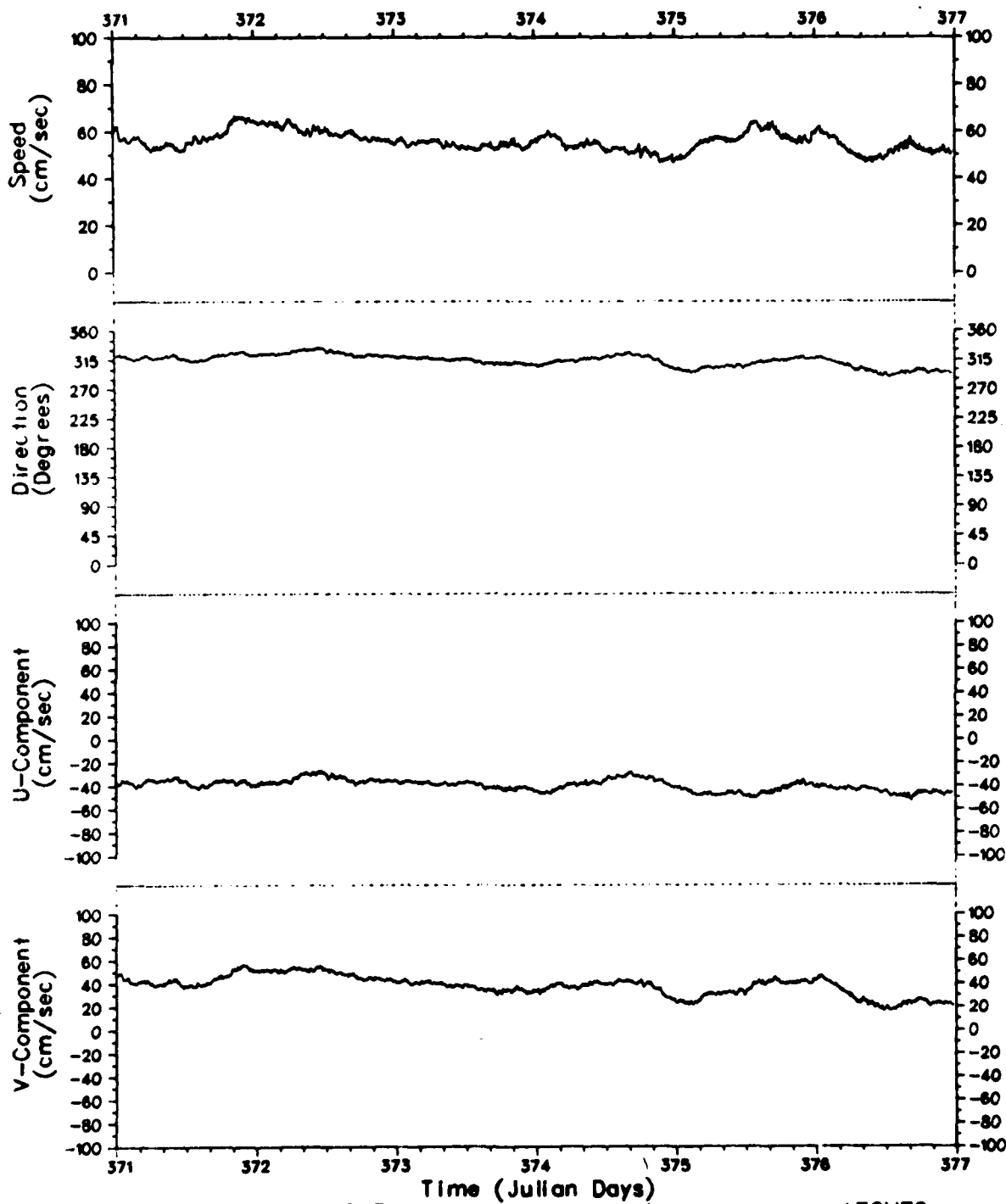
Figure 30.



File : VACMF
 Meter : 000407
 Latitude : 25.806
 Longitude : -89 7442

Array : ATOM79
 Depth : 100
 Start : 19 DEC 1979
 End : 14 JAN 1980

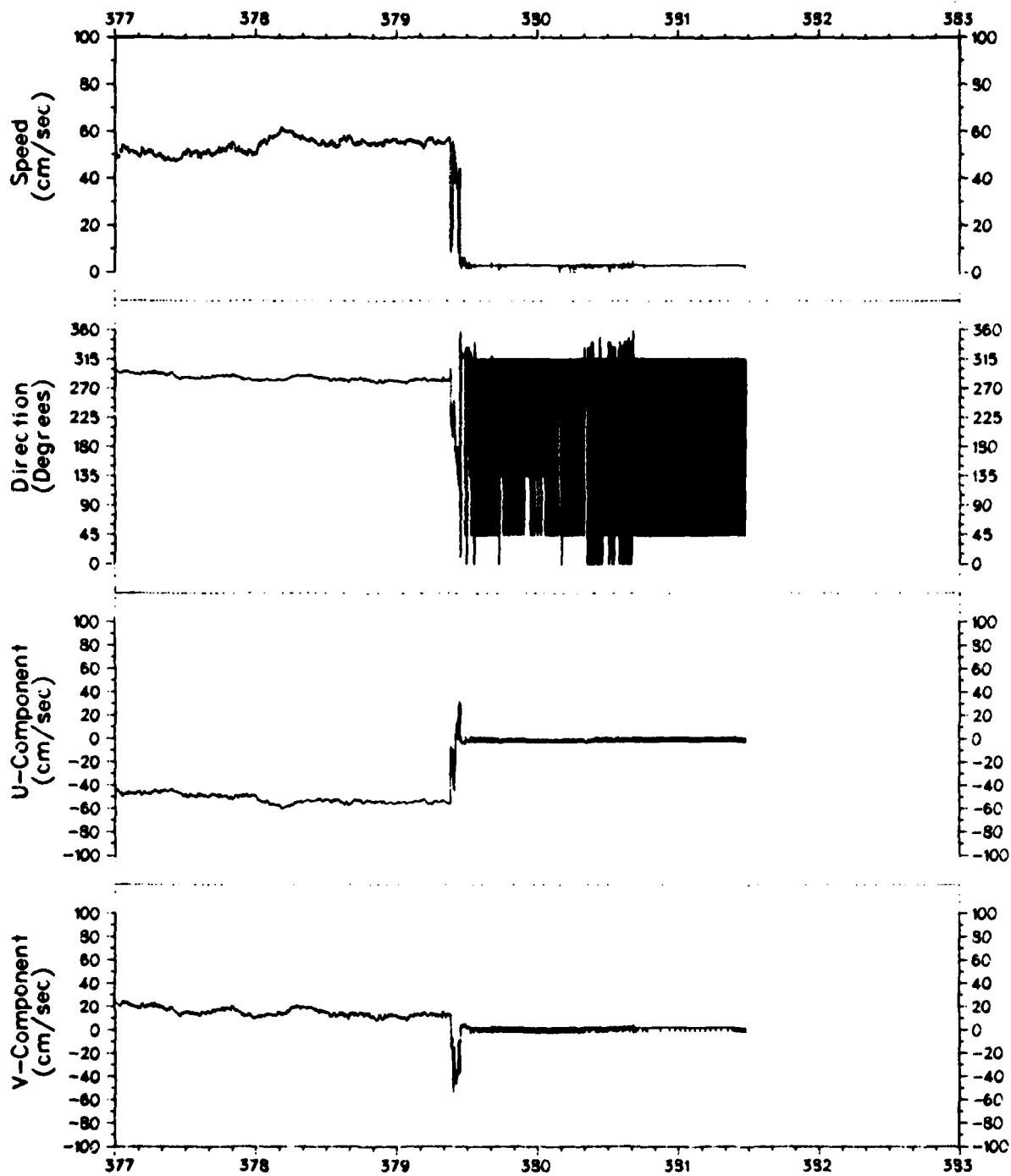
Figure 31.



File : VACMF
 Meter : 000407
 Latitude : 25.806
 Longitude :-89.7442

Array : ATOM79
 Depth : 100
 Start : 19 DEC 1979
 End : 14 JAN 1980

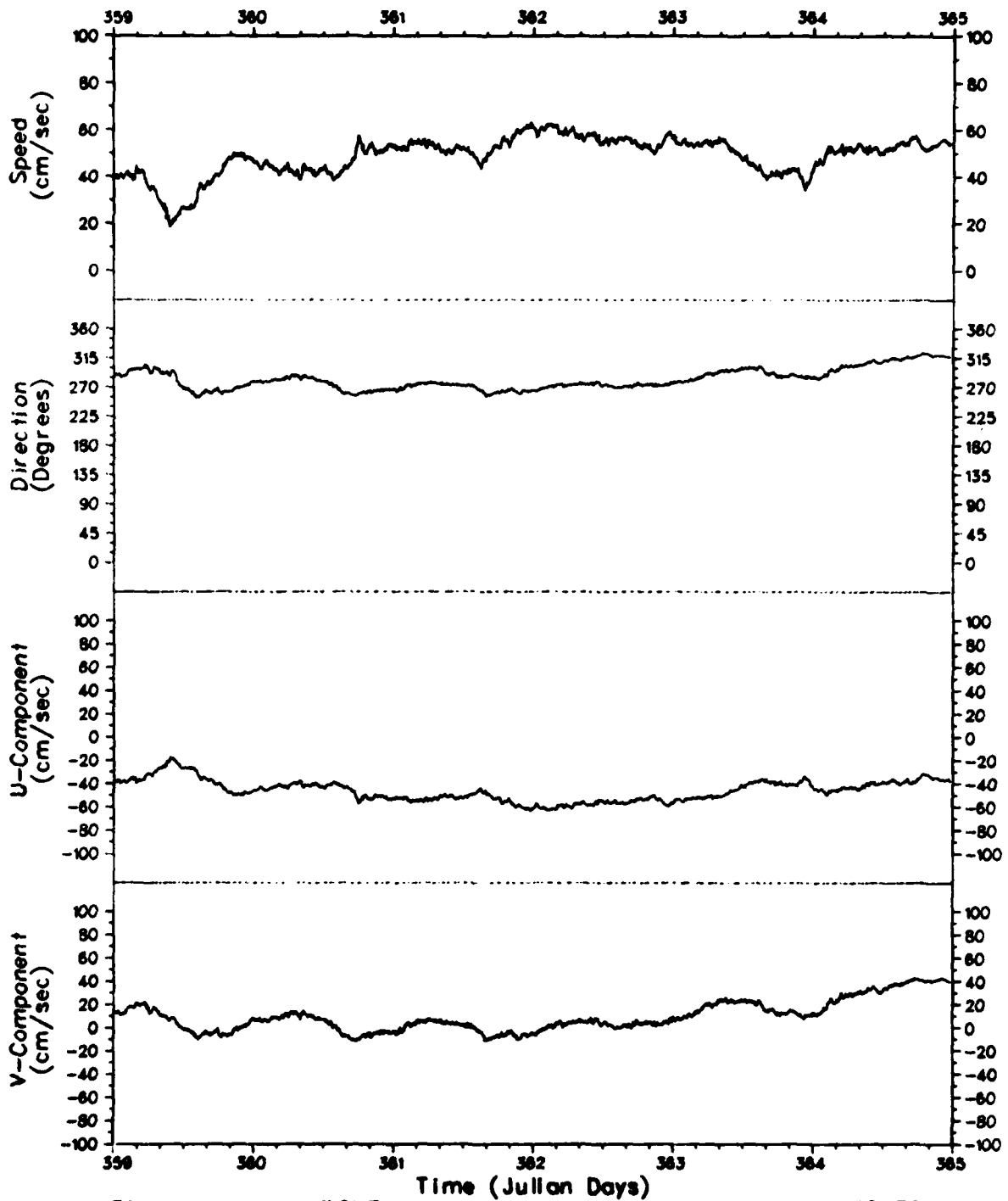
Figure 32.



File : VACMF
 Meter : 000407
 Latitude : 25.806
 Longitude : -89 7442

Array : ATOM79
 Depth : 100
 Start : 19 DEC 1979
 End : 14 JAN 1980

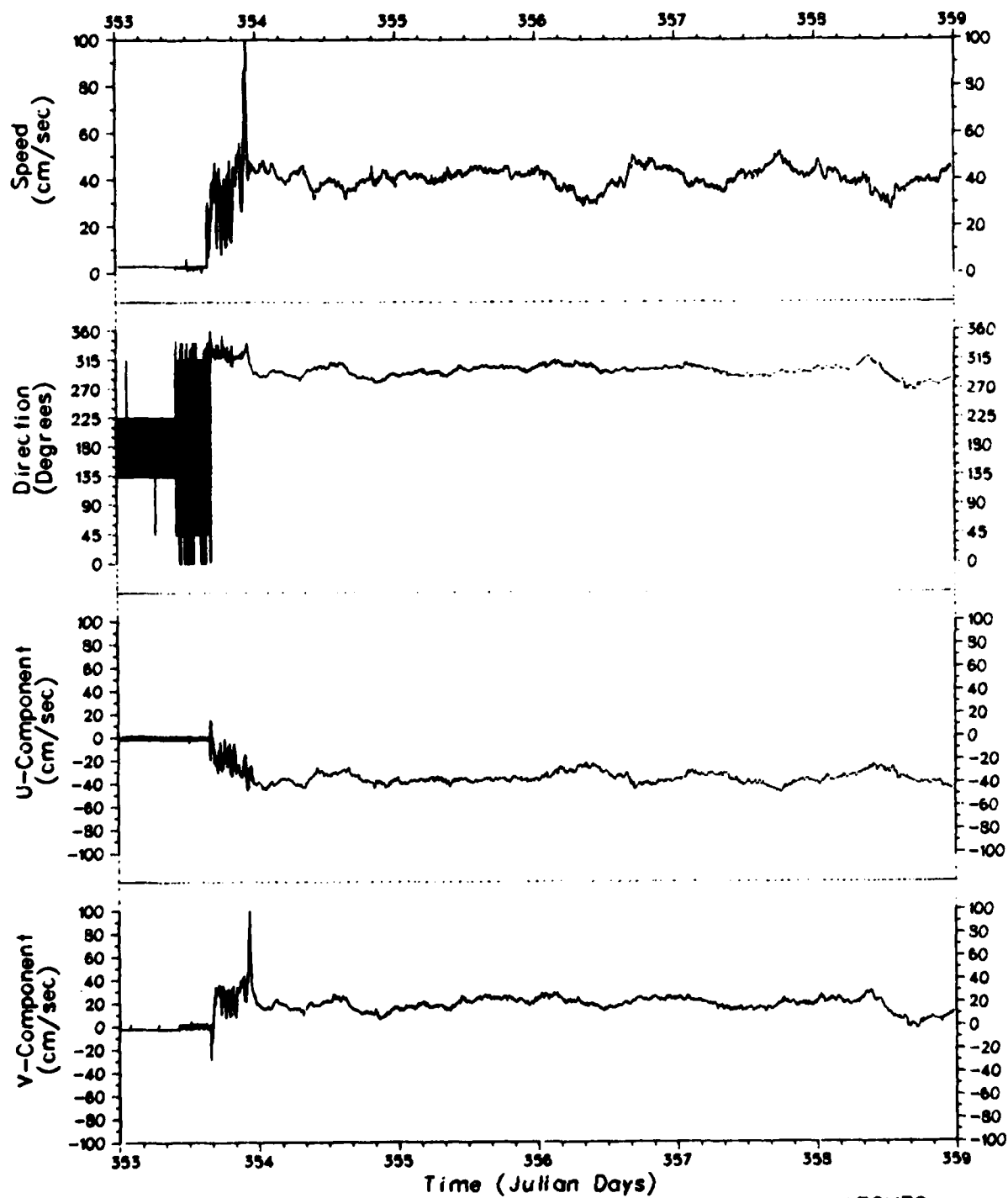
Figure 33.



File : VACMF
 Meter : 000407
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 100
 Start : 19 DEC 1979
 End : 14 JAN 1980

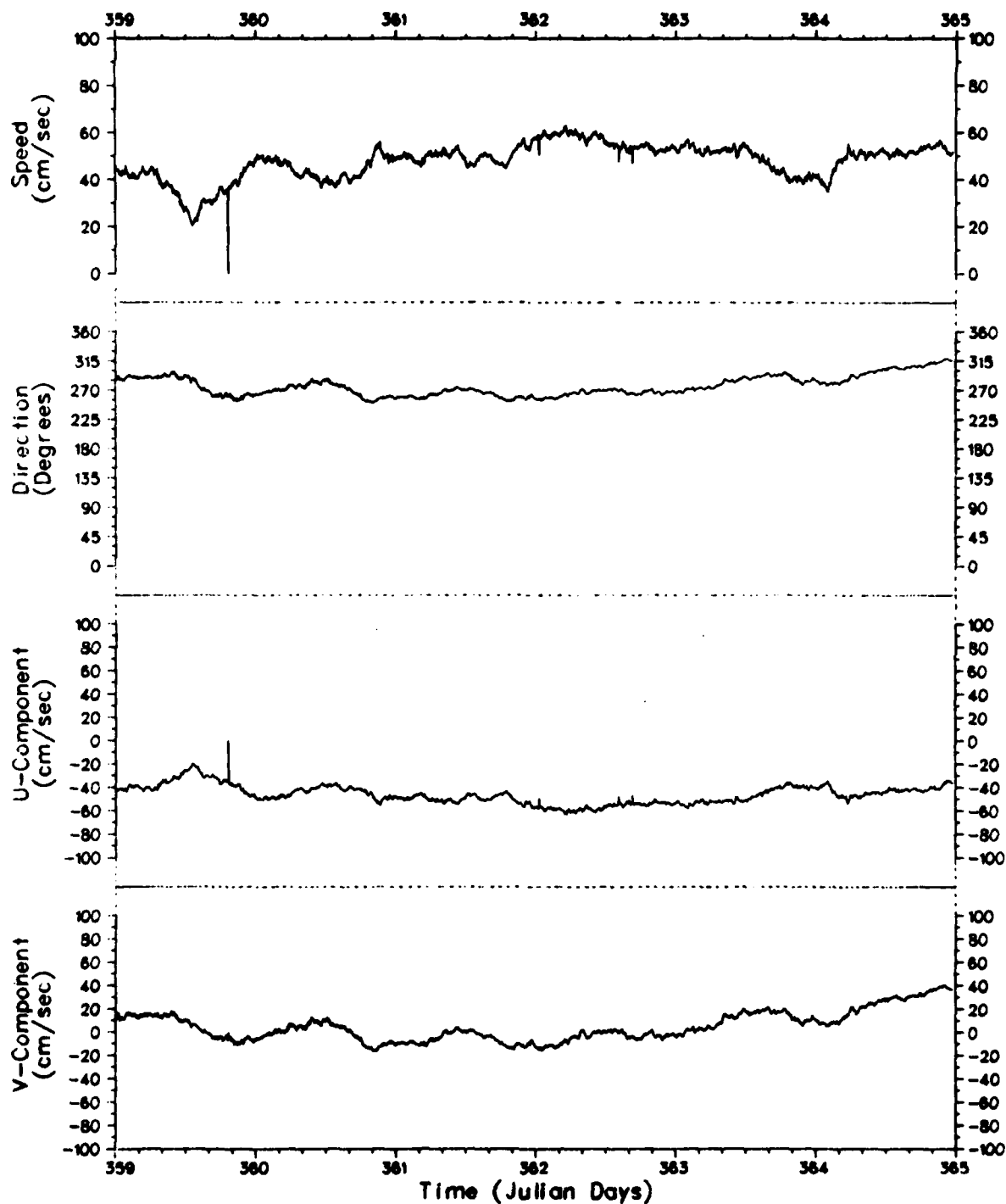
Figure 34.



File : VACMF
 Meter : 000416
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 116
 Start : 19 DEC 1979
 End : 14 JAN 1980

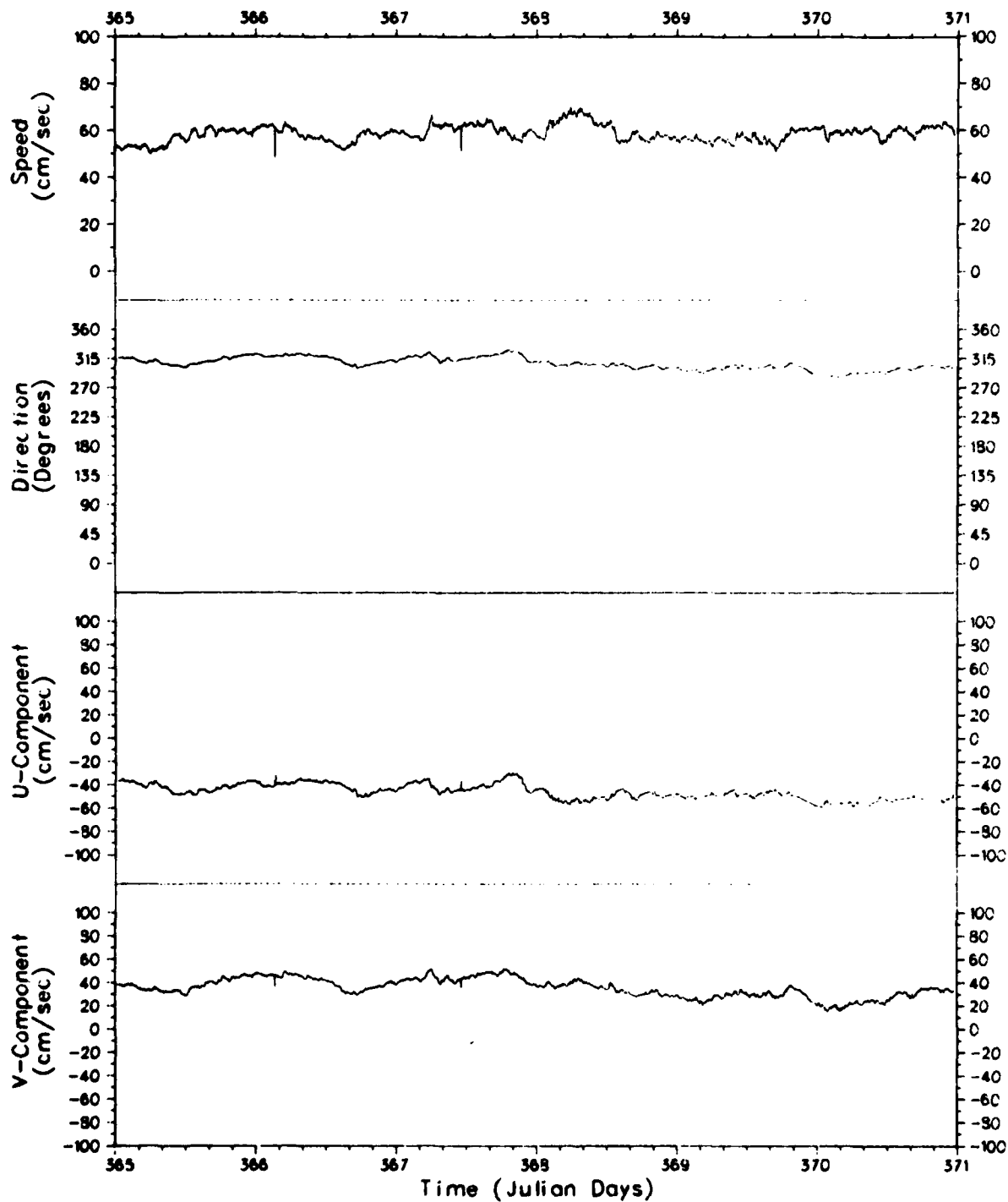
Figure 35.



File : VACMF
 Mefer : 000416
 Latitude : 25.806
 Longitude :-89.7442

Array : ATOM79
 Depth : 116
 Start : 19 DEC 1979
 End : 14 JAN 1980

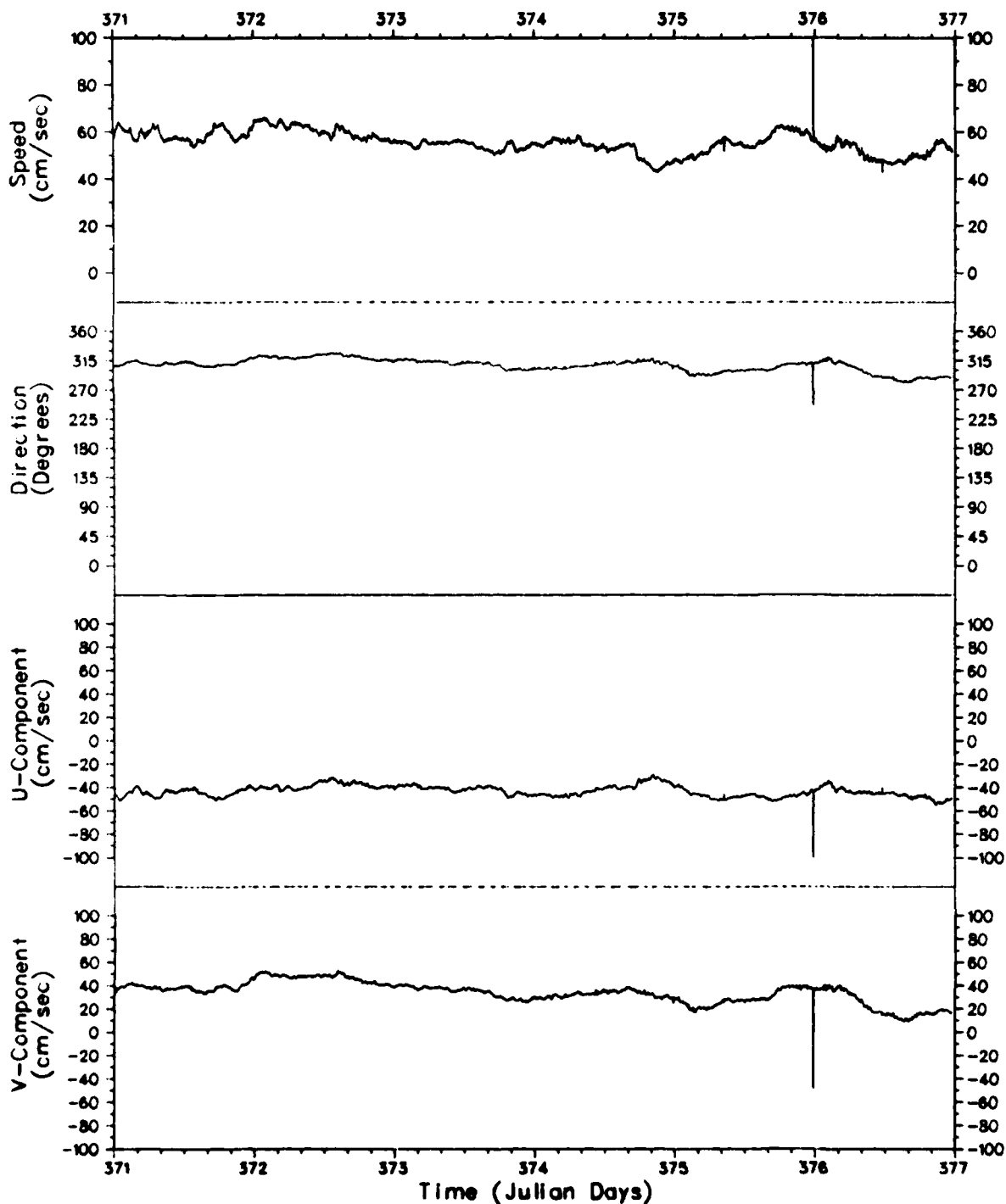
Figure 36.



File : VACMF
 Meter : 000416
 Latitude : 25.806
 Longitude : -89 7442

Array : ATOM79
 Depth : 116
 Start : 19 DEC 1979
 End : 14 JAN 1980

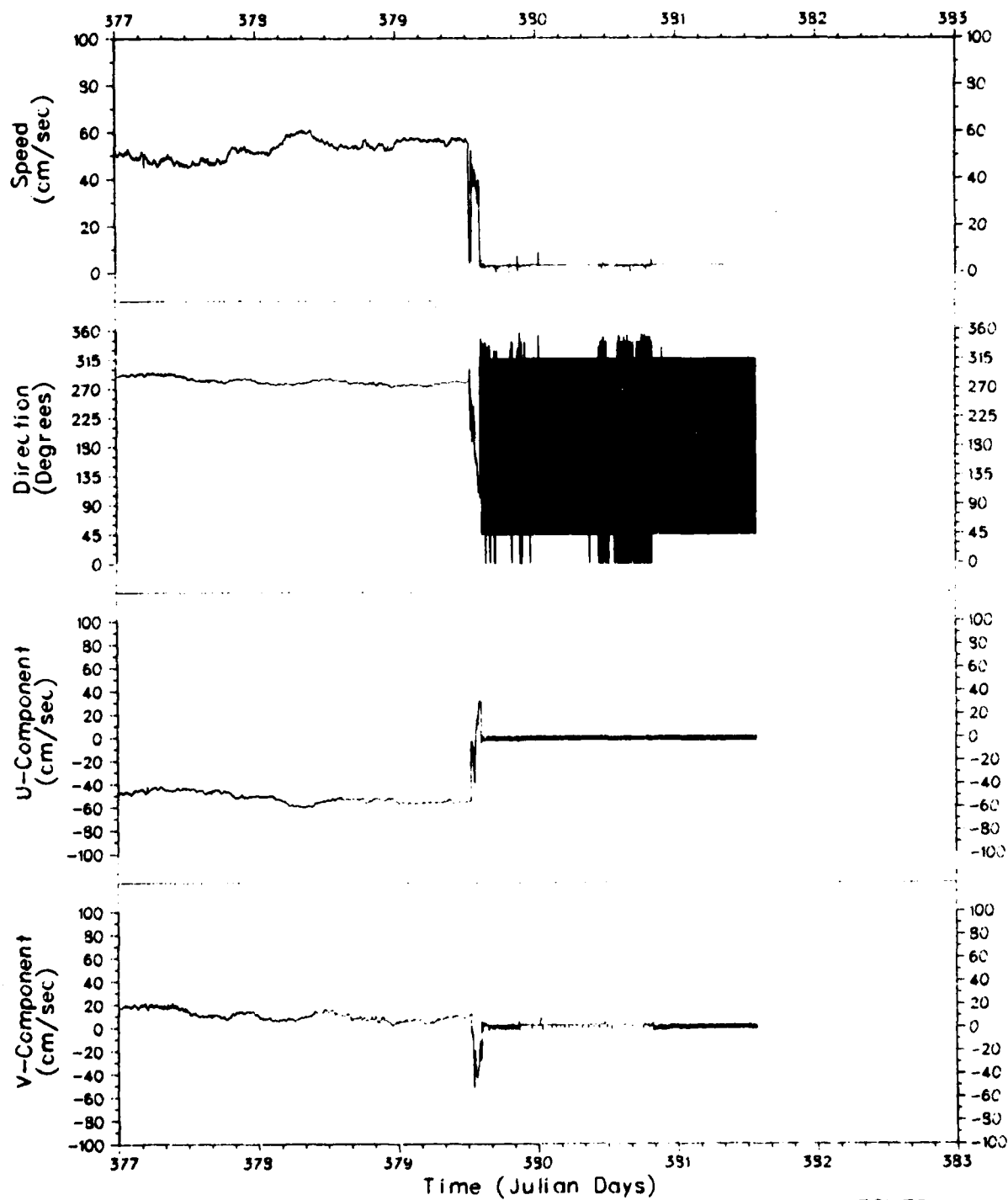
Figure 37.



File : VACMF
 Meter : 000416
 Latitude : 25.806
 Longitude :-89.7442

Array : ATOM79
 Depth : 116
 Start : 19 DEC 1979
 End : 14 JAN 1980

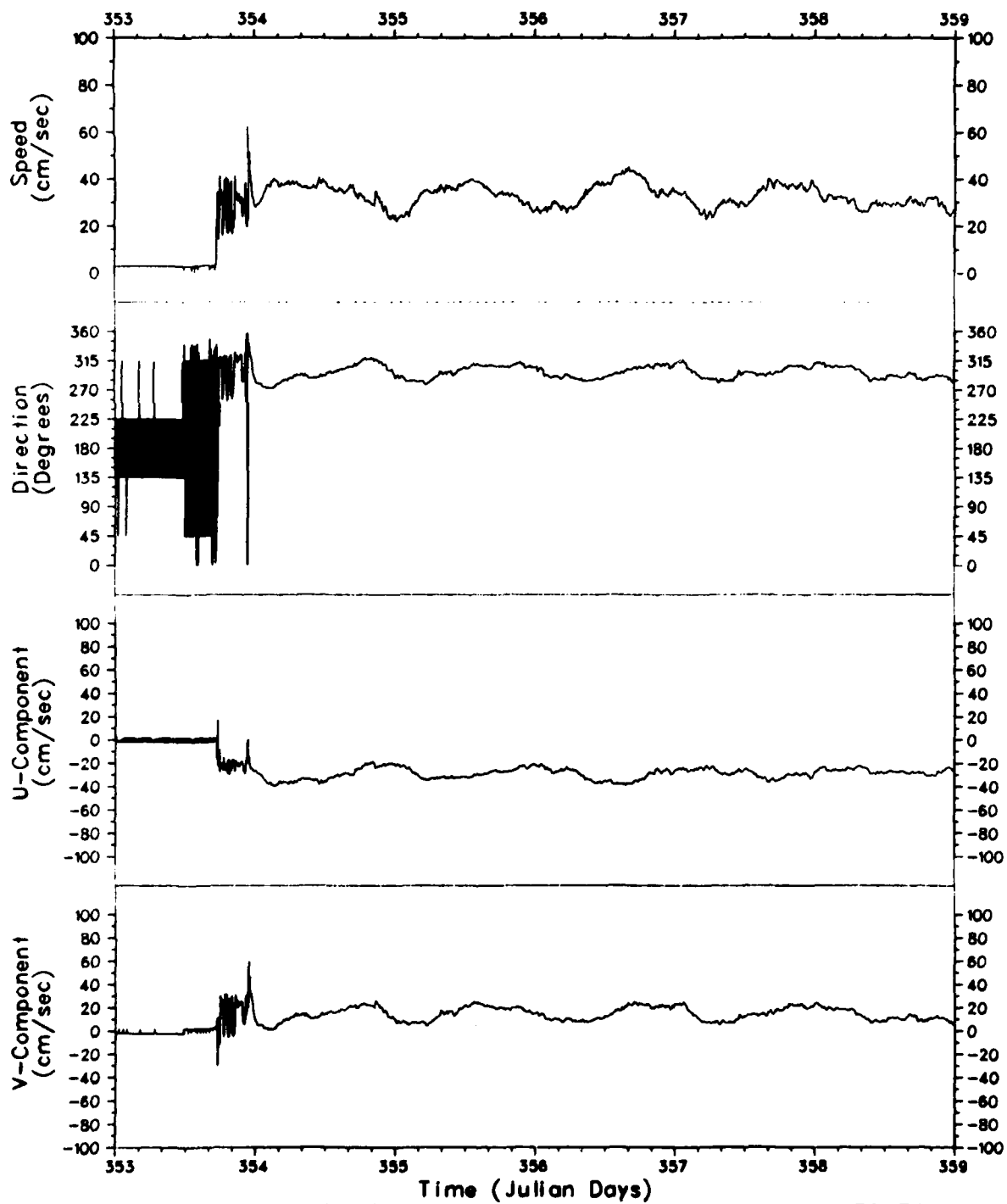
Figure 38.



File : VACMF
 Meter : 000416
 Latitude : 25.806
 Longitude : -89 7442

Array ATOM79
 Depth 116
 Start : 19 DEC 1979
 End : 14 JAN 1980

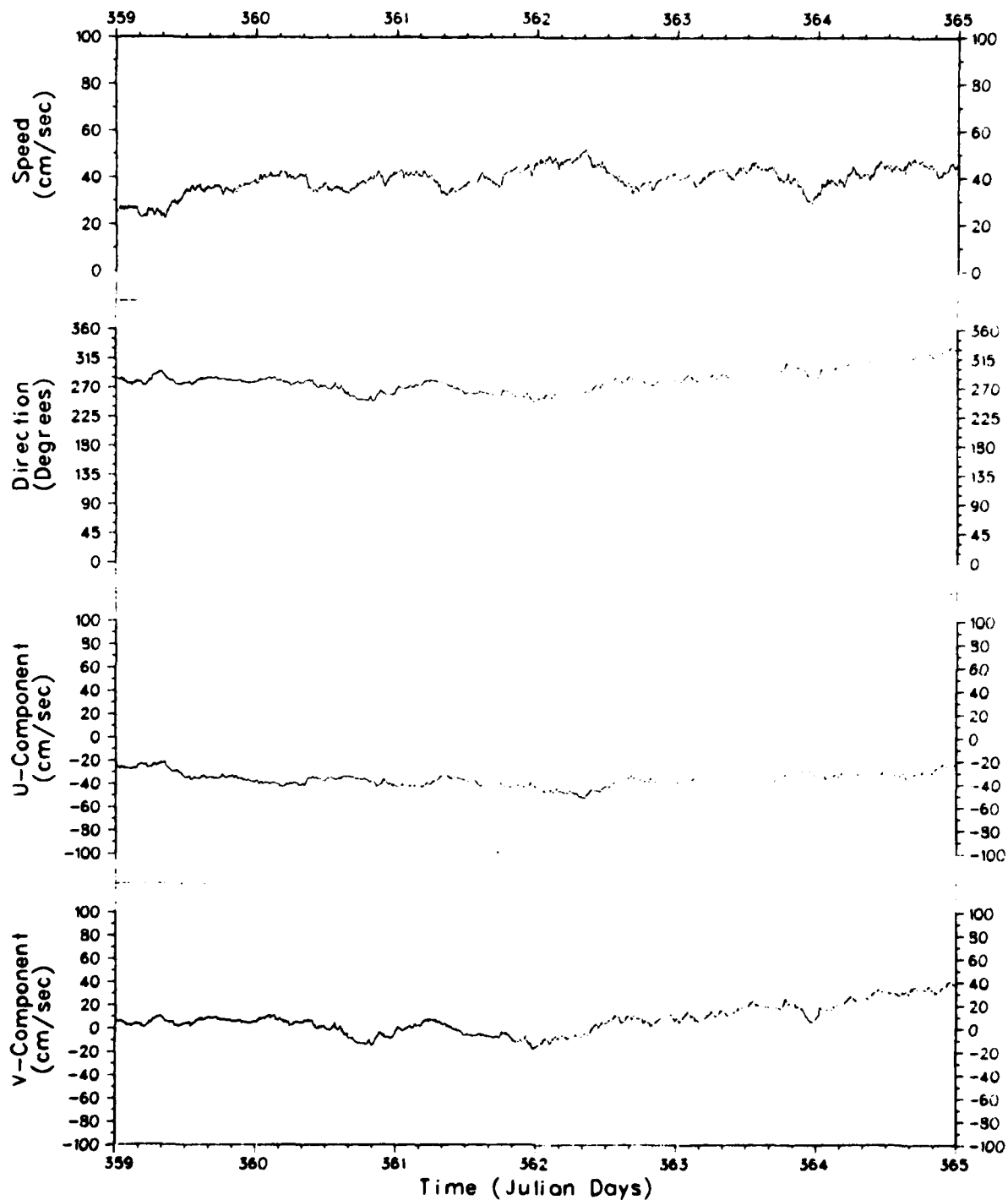
Figure 39.



File : VACMF
 Meter : 000296
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 214
 Start : 19 DEC 1979
 End : 14 JAN 1980

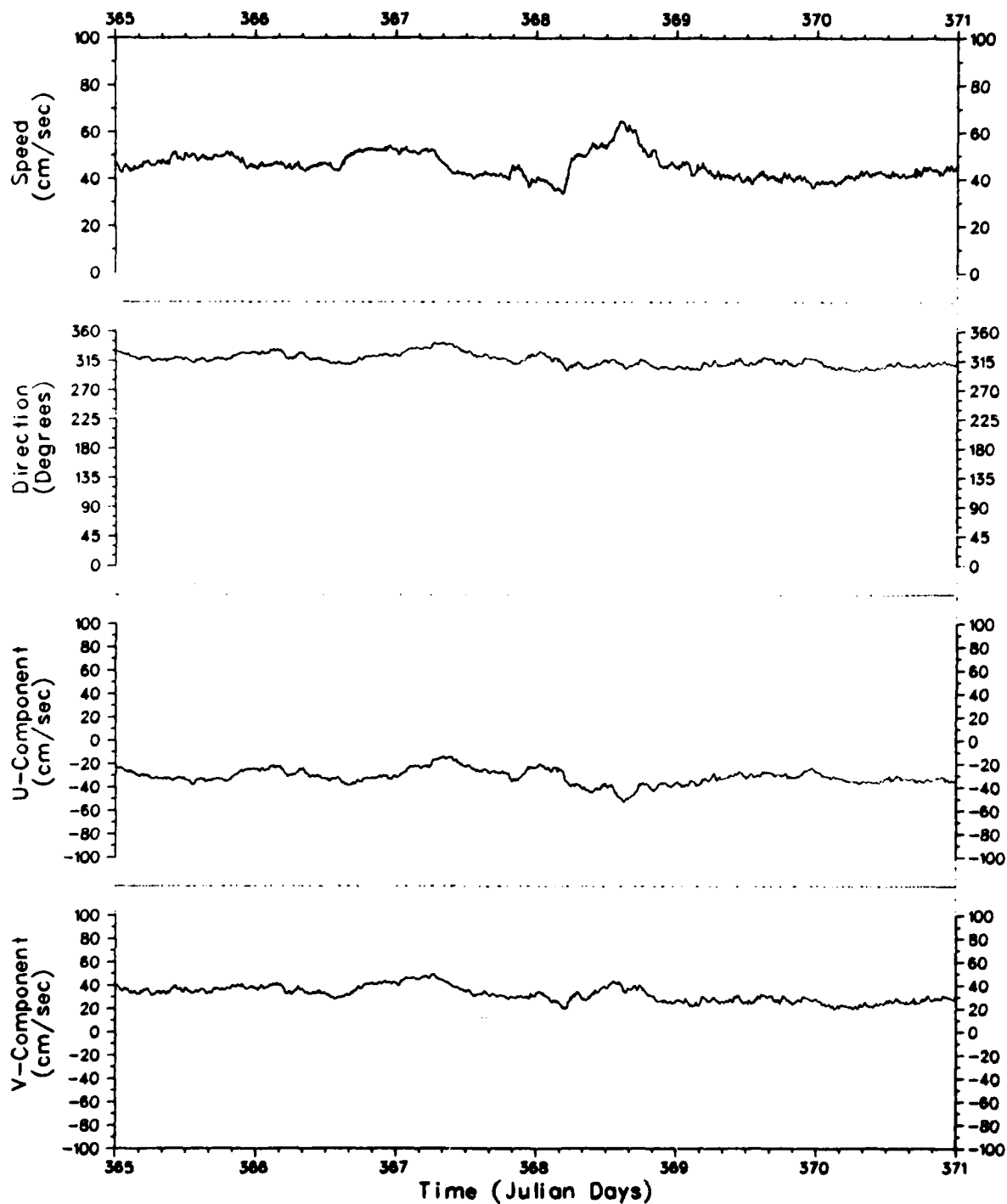
Figure 40.



File : VACMF
 Meter : 000296
 Latitude : 25.806
 Longitude : -89 7442

Array : ATOM79
 Depth : 214
 Start : 19 DEC 1979
 End : 14 JAN 1980

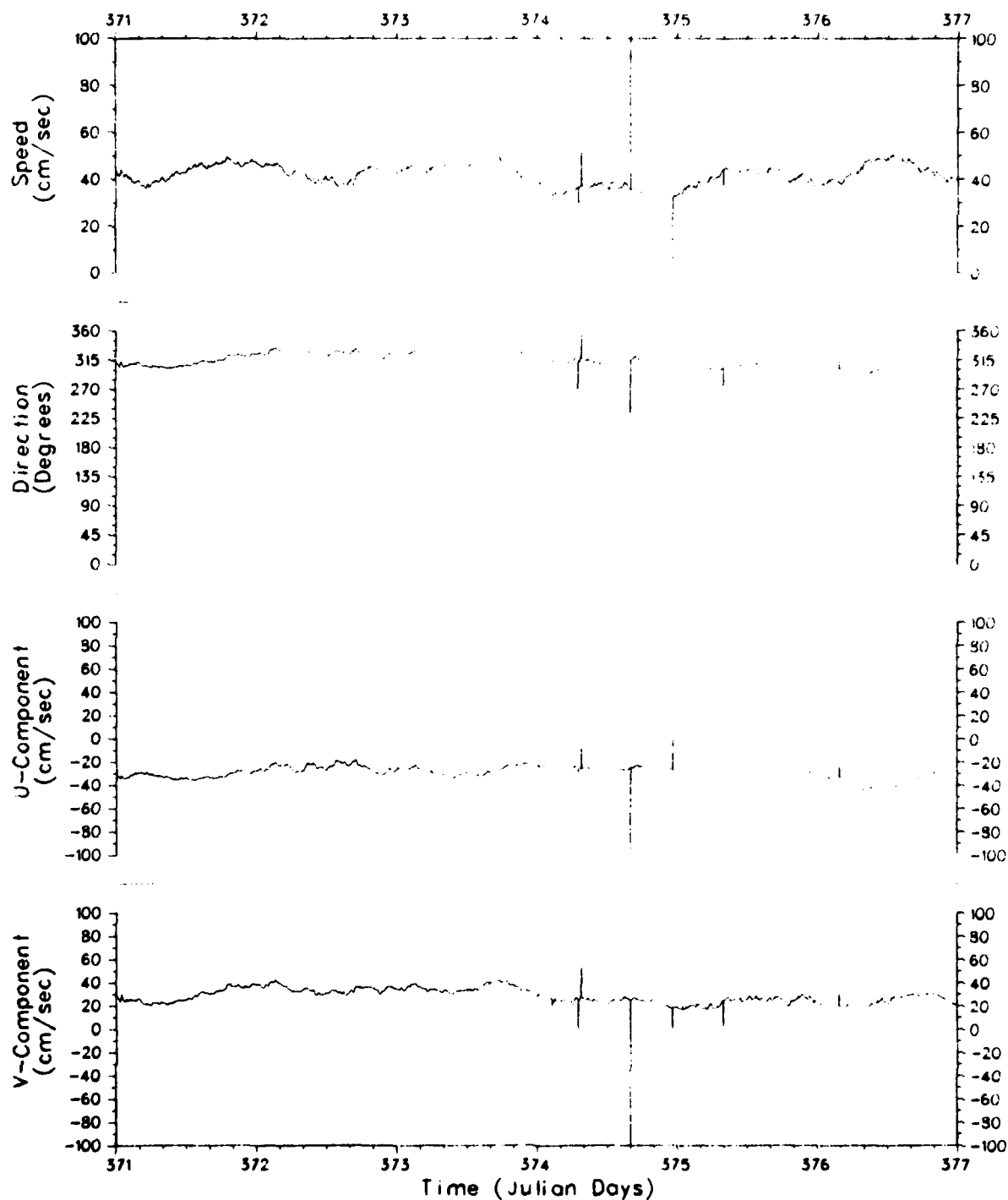
Figure 41.



File : VACMF
Meter : 000296
Latitude : 25.806
Longitude : -89.7442

Array : ATOM79
Depth : 214
Start : 19 DEC 1979
End : 14 JAN 1980

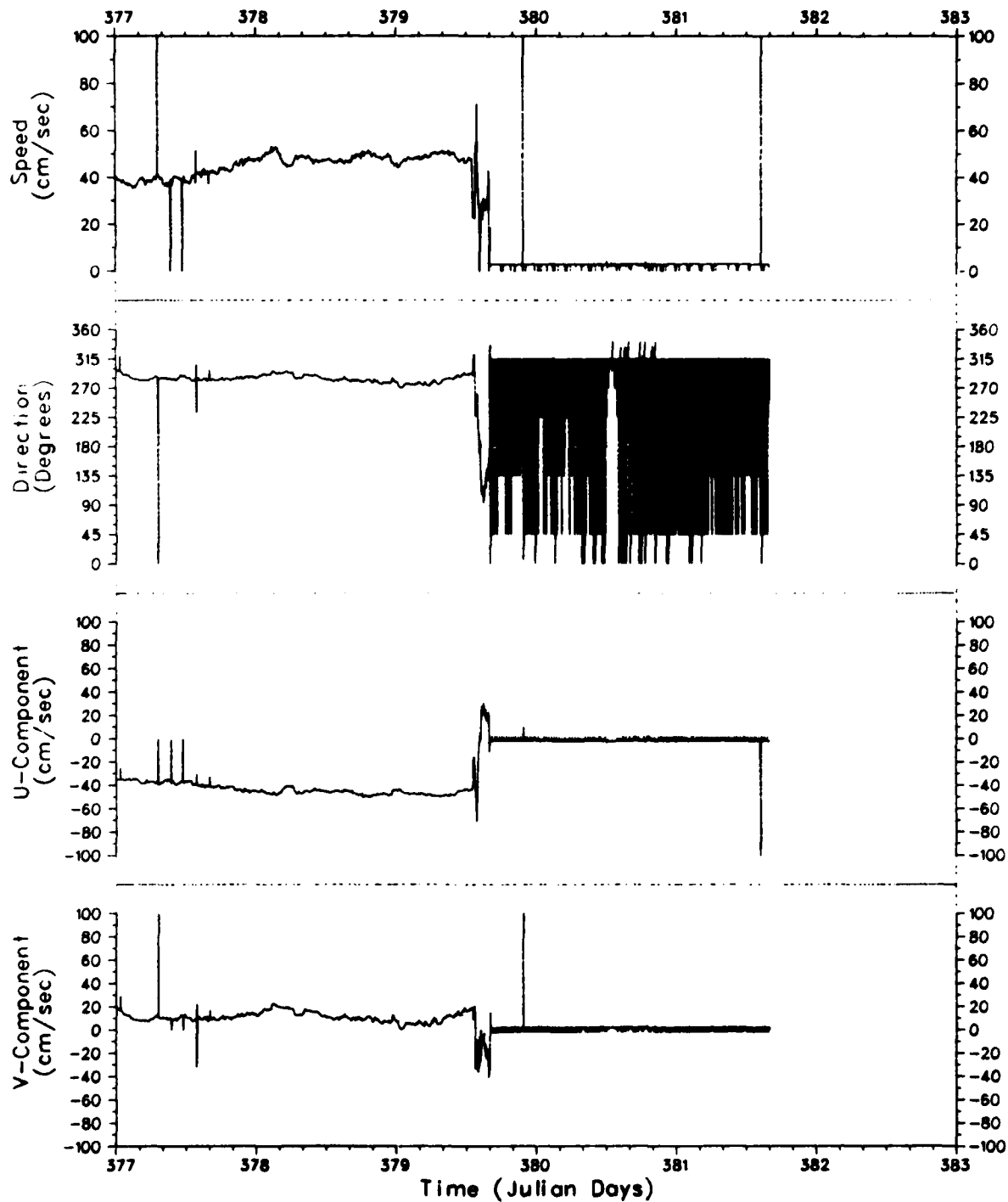
Figure 42.



File : VACMF
 Meter : 000296
 Latitude : 25.806
 Longitude : -89 7442

Array ATOM79
 Depth 214
 Start : 19 DEC 1979
 End : 14 JAN 1980

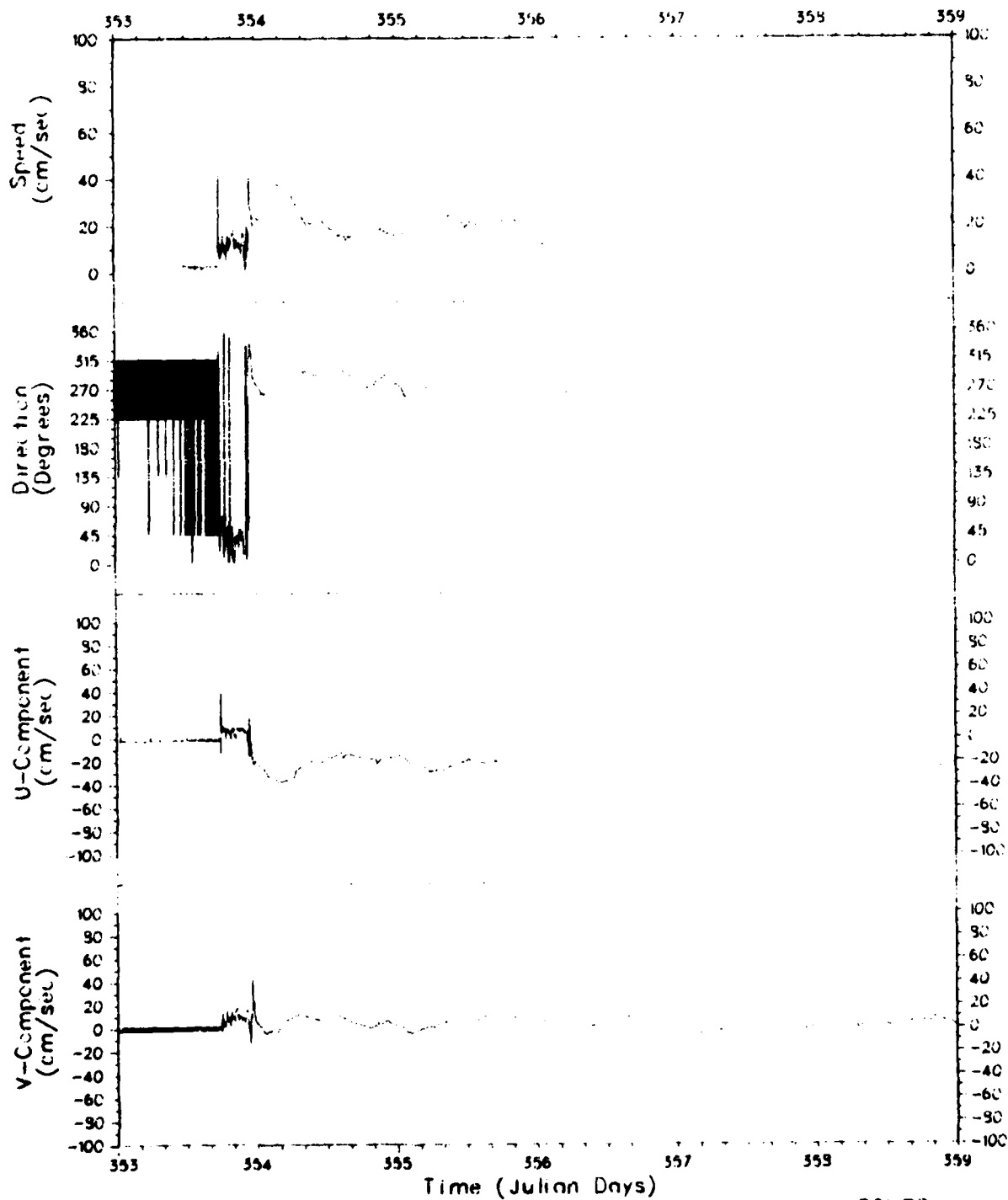
Figure 43.



File : VACMF
 Meter : 000296
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 214
 Start : 19 DEC 1979
 End : 14 JAN 1980

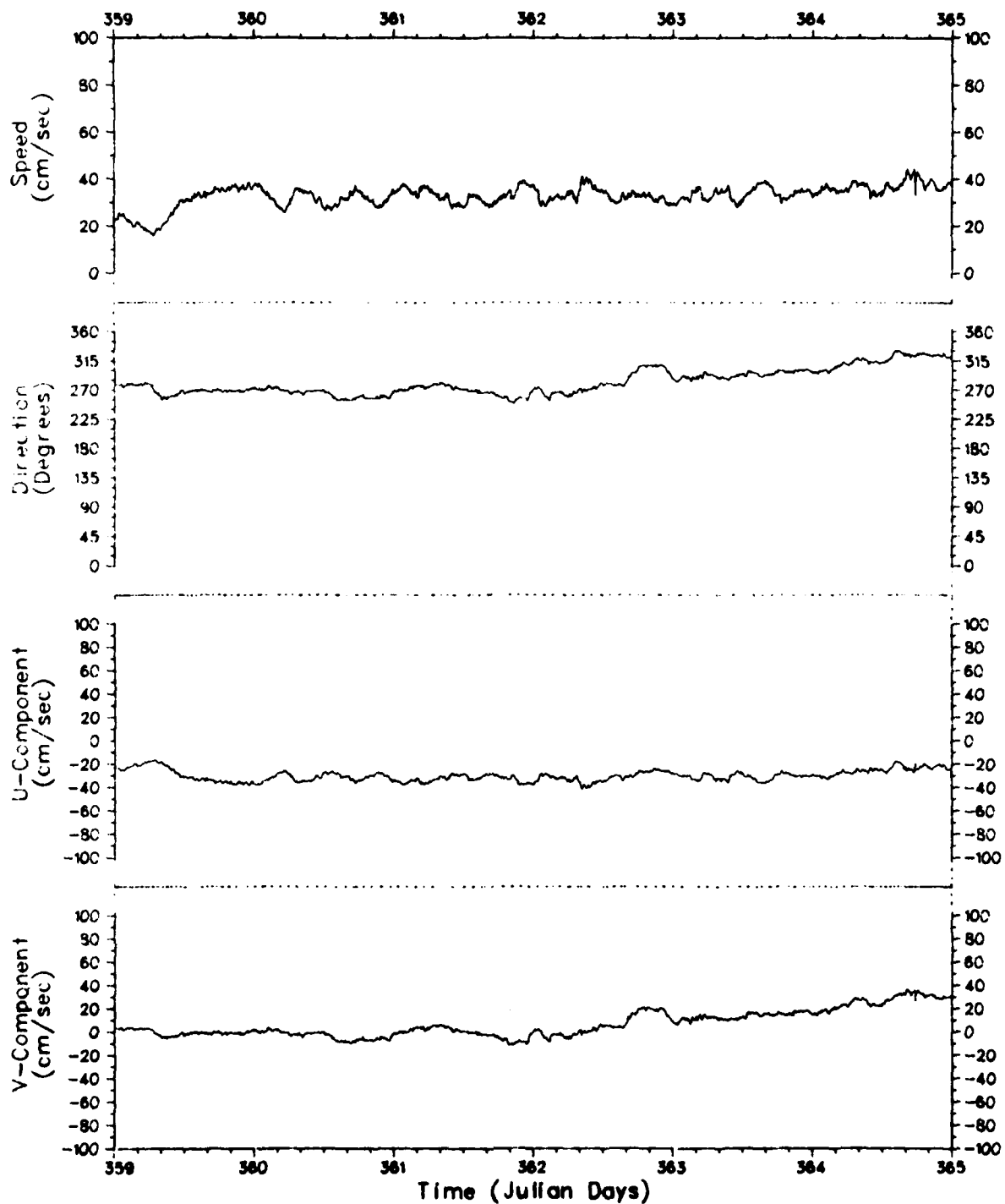
Figure 44.



File VACMF
 Meter 000412
 Latitude 25.806
 Longitude -89.7442

Array ATOM79
 Depth 350
 Start 19 DEC 1979
 End 14 JAN 1980

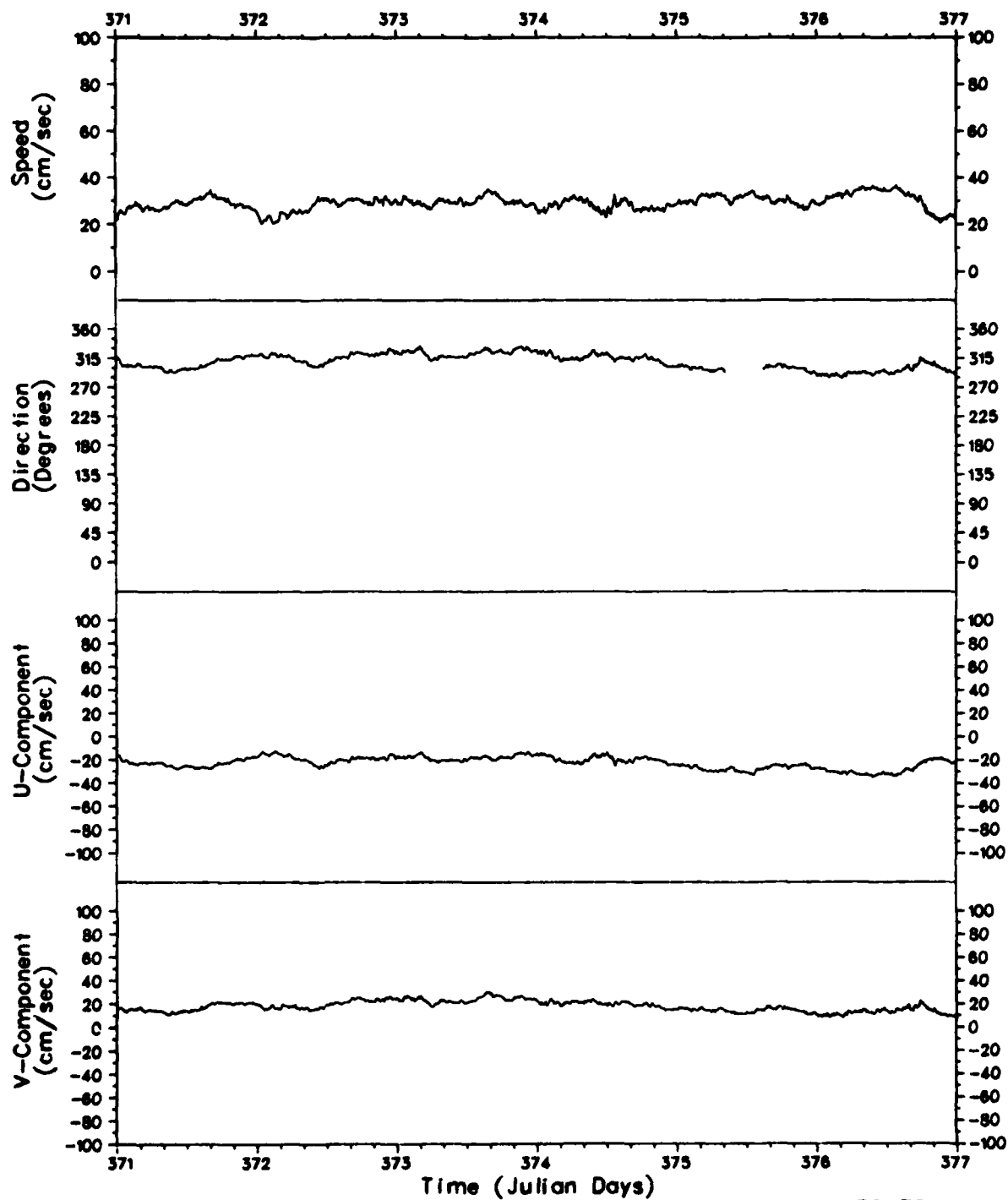
Figure 45.



File : VACMF
 Meter : 000412
 Latitude : 25.806
 Longitude : -89 7442

Array : ATOM79
 Depth : 350
 Start : 19 DEC 1979
 End : 14 JAN 1980

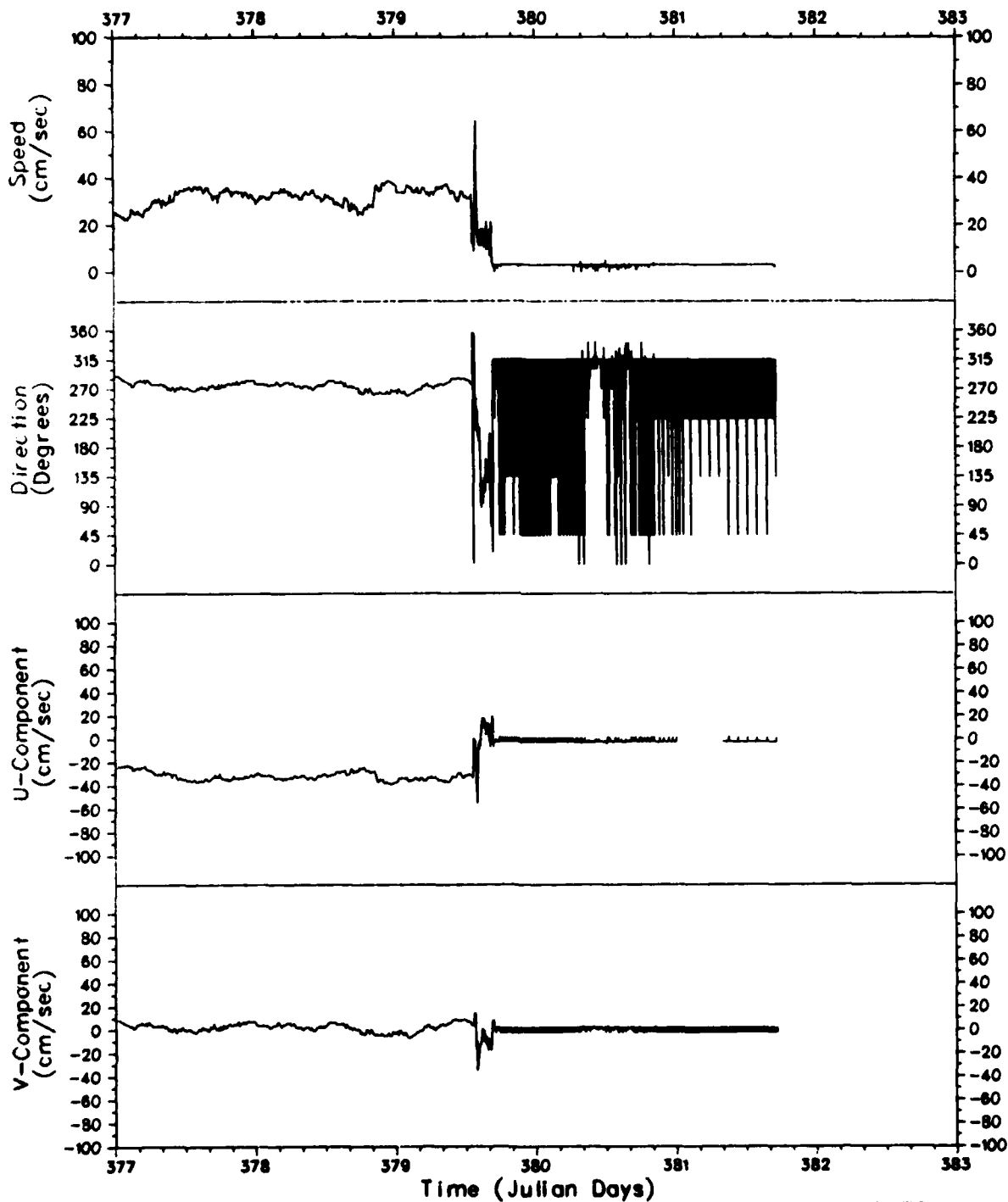
Figure 46.



File : VACMF
 Meter : 000412
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 350
 Start : 19 DEC 1979
 End : 14 JAN 1980

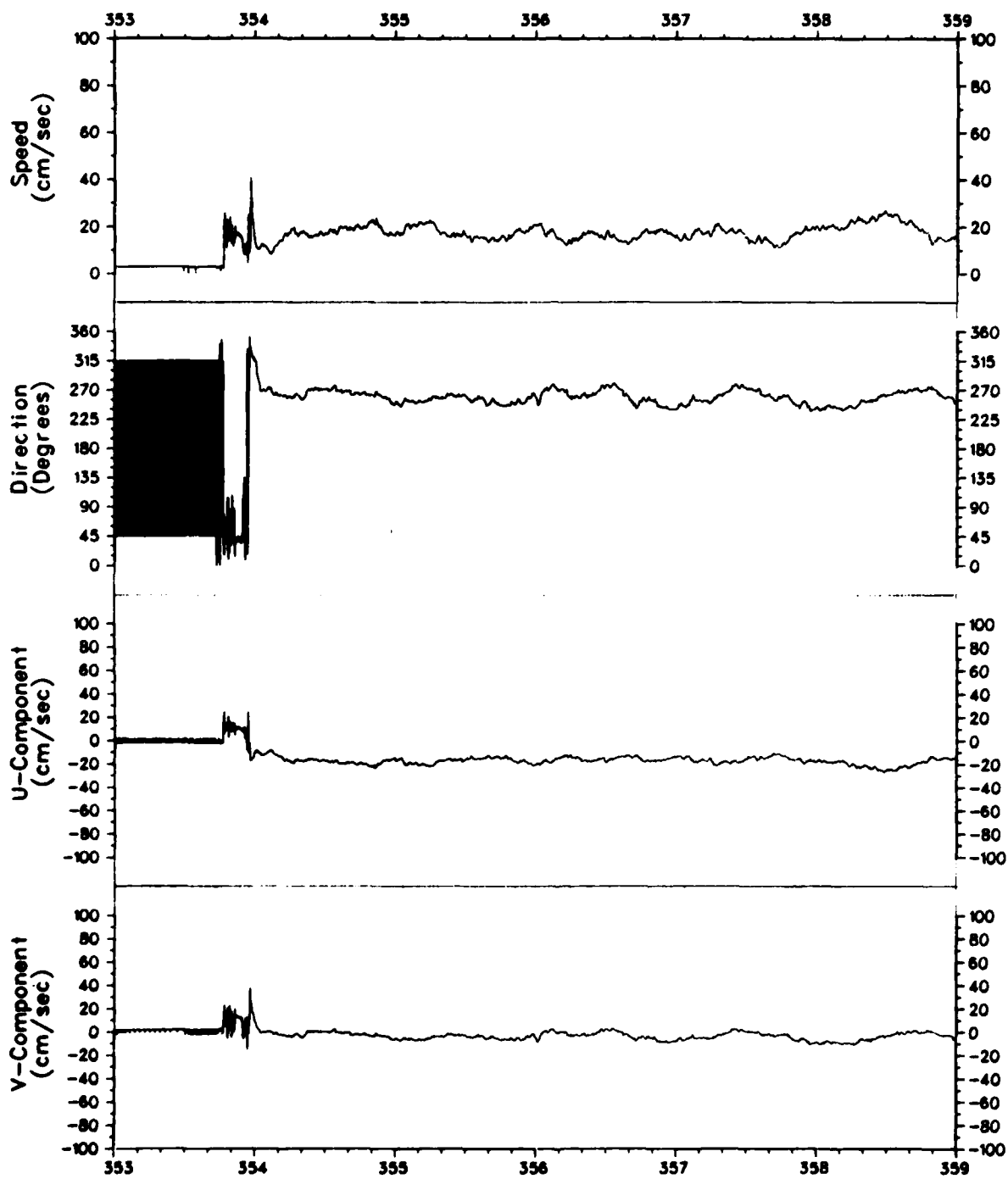
Figure 47.



File : VACMF
 Meter : 000412
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 350
 Start : 19 DEC 1979
 End : 14 JAN 1980

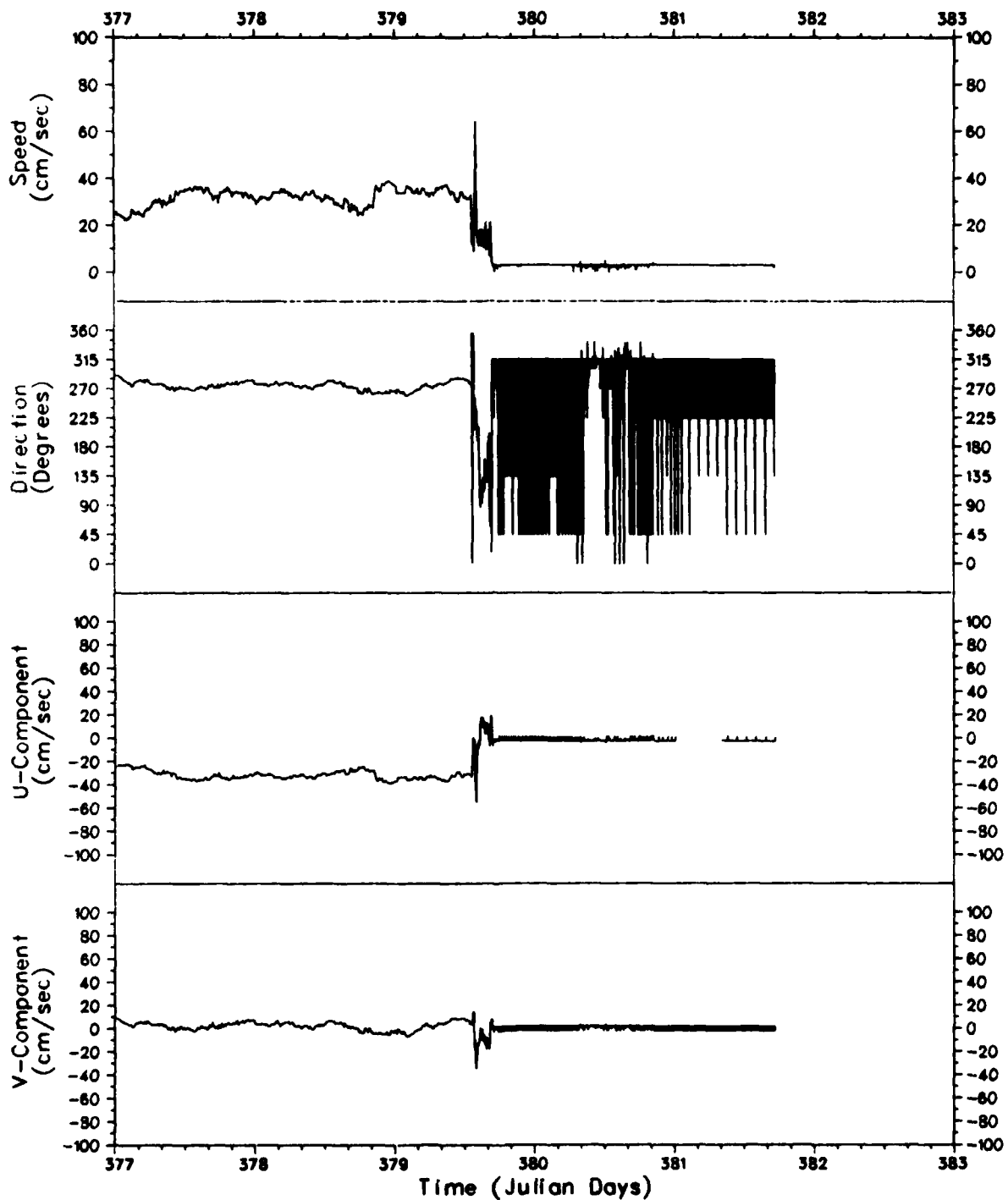
Figure 48.



File : VACMF
 Meter : 000289
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 500
 Start : 19 DEC 1979
 End : 14 JAN 1980

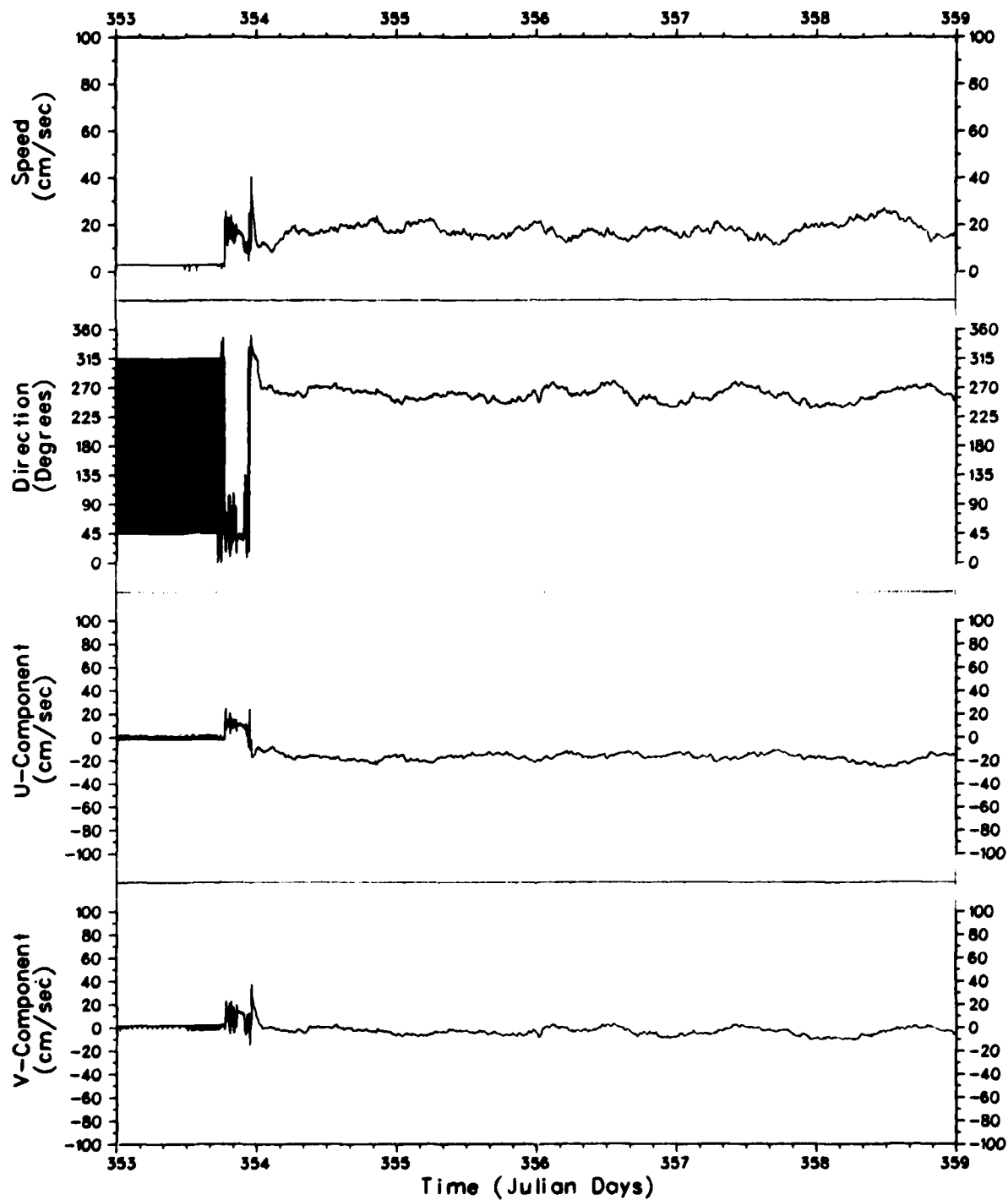
Figure 49.



File : VACMF
 Meter : 000412
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 350
 Start : 19 DEC 1979
 End : 14 JAN 1980

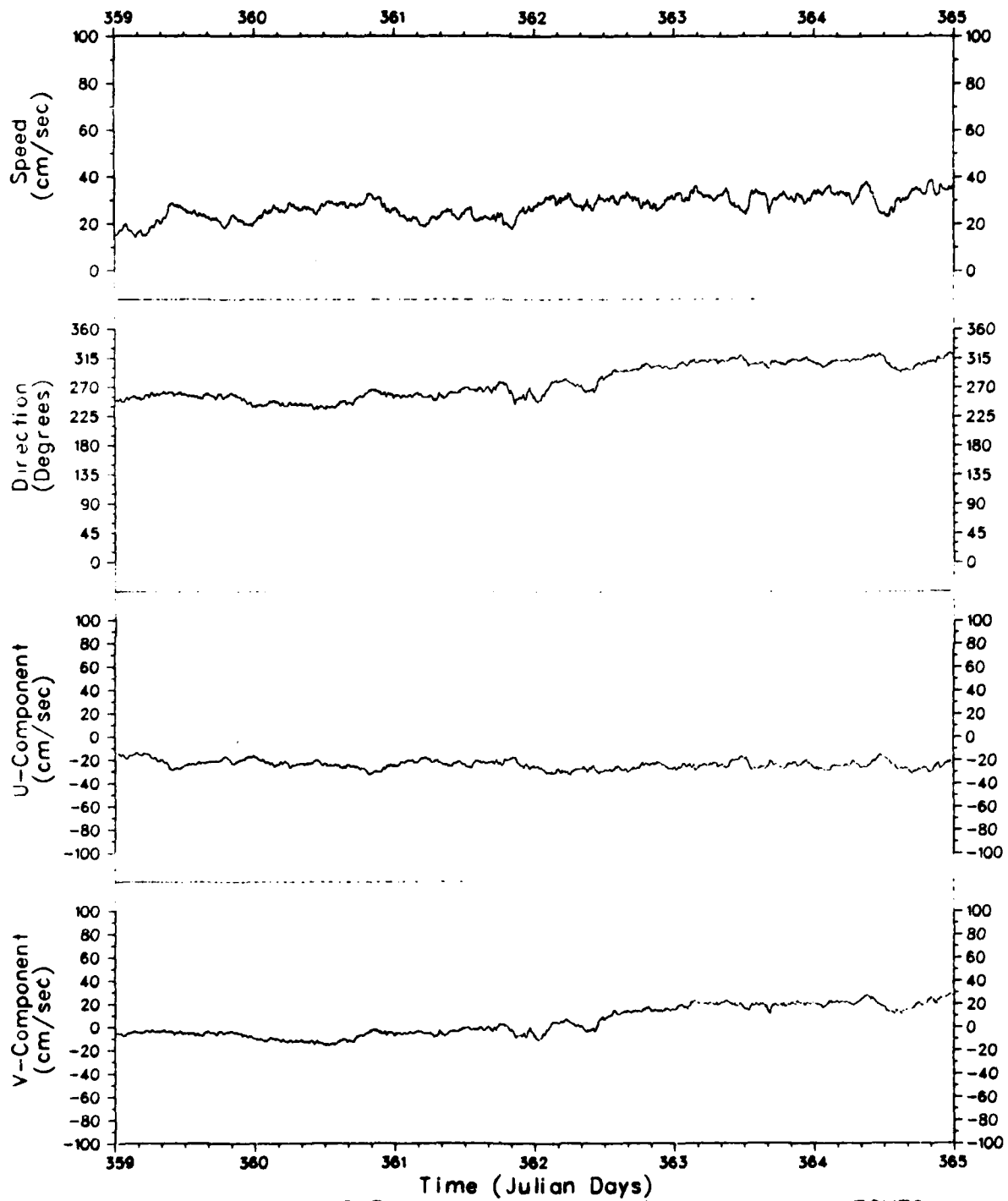
Figure 48.



File : VACMF
Meter : 000289
Latitude : 25.806
Longitude : -89.7442

Array : ATOM79
Depth : 500
Start : 19 DEC 1979
End : 14 JAN 1980

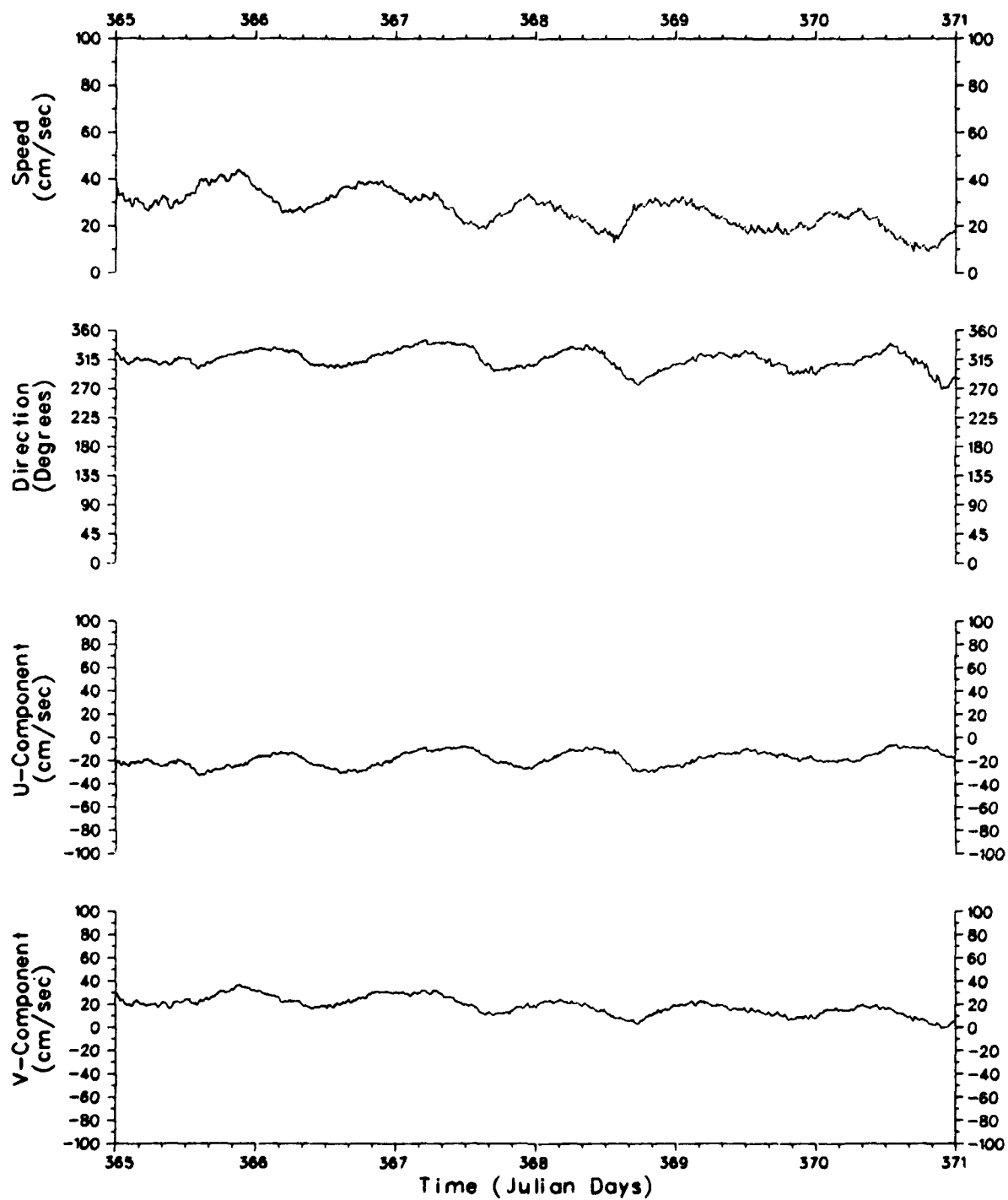
Figure 49.



File : VACMF
 Meter : 000289
 Latitude : 25.806
 Longitude : -89.7442

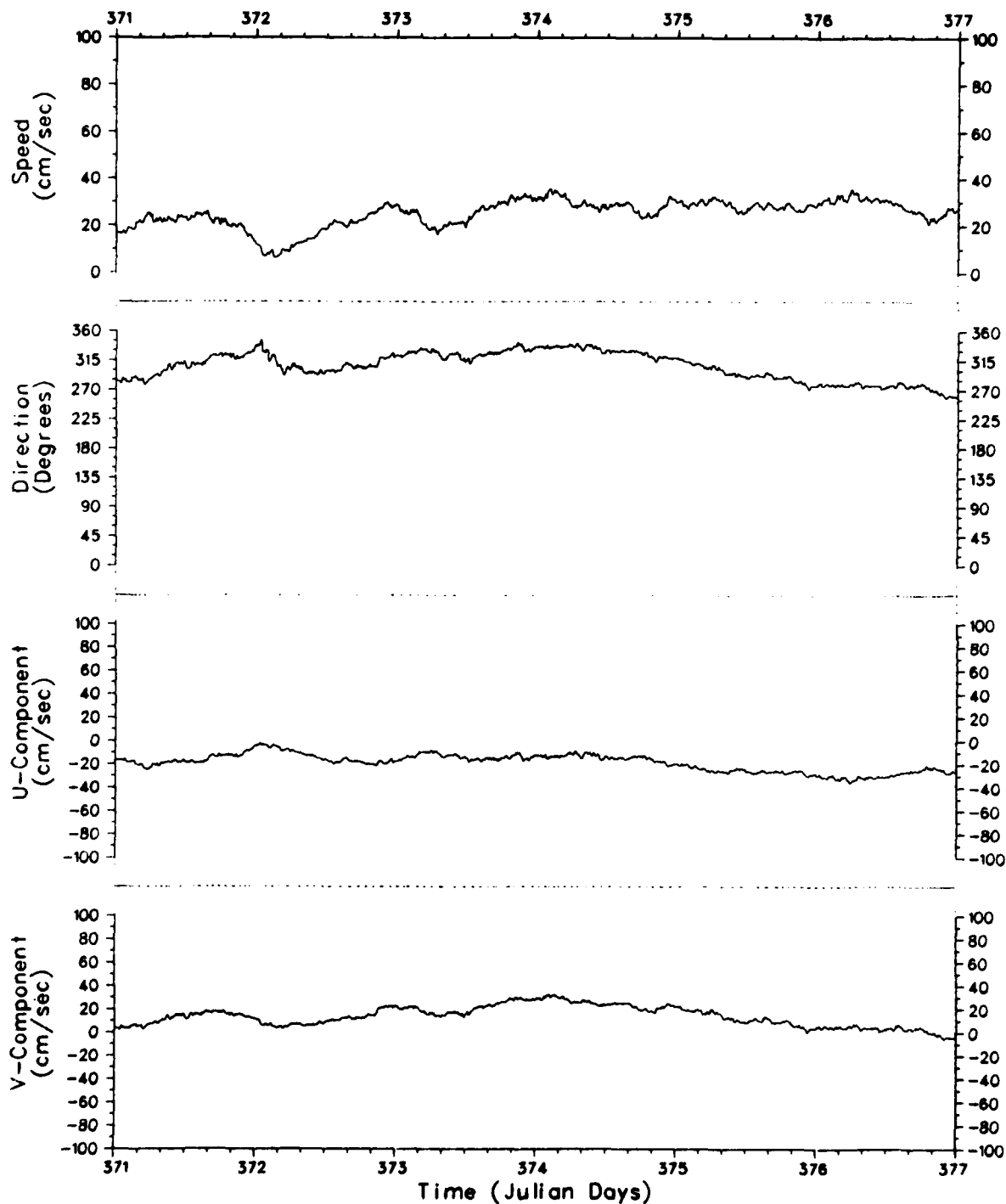
Array : ATOM79
 Depth : 500
 Start : 19 DEC 1979
 End : 14 JAN 1980

Figure 50.



File : VACMF Array : ATOM79
 Meter : 000289 Depth : 500
 Latitude : 25.80

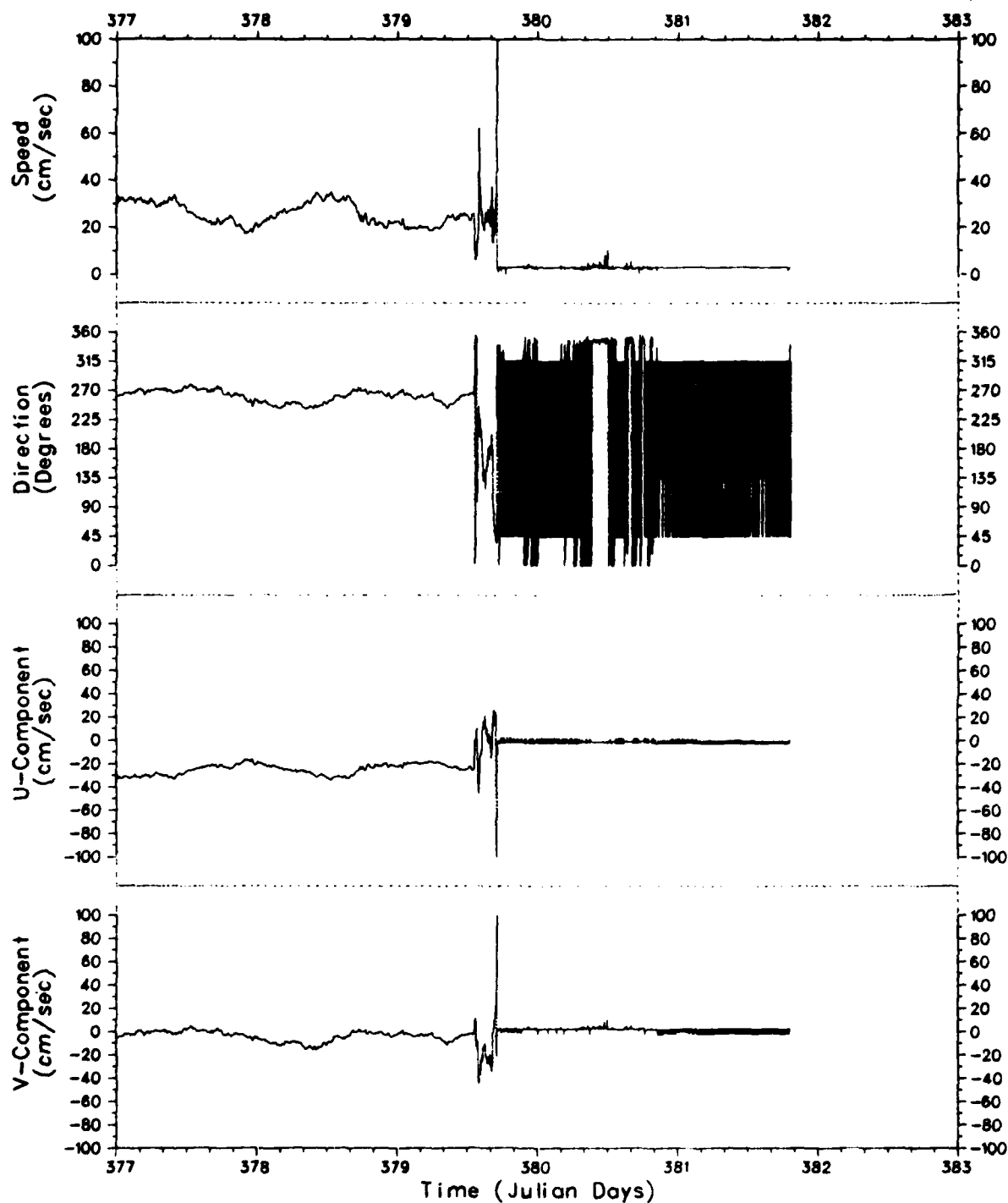
Figure 51.



File : VACMF
 Meter : 000289
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 500
 Start : 19 DEC 1979
 End : 14 JAN 1980

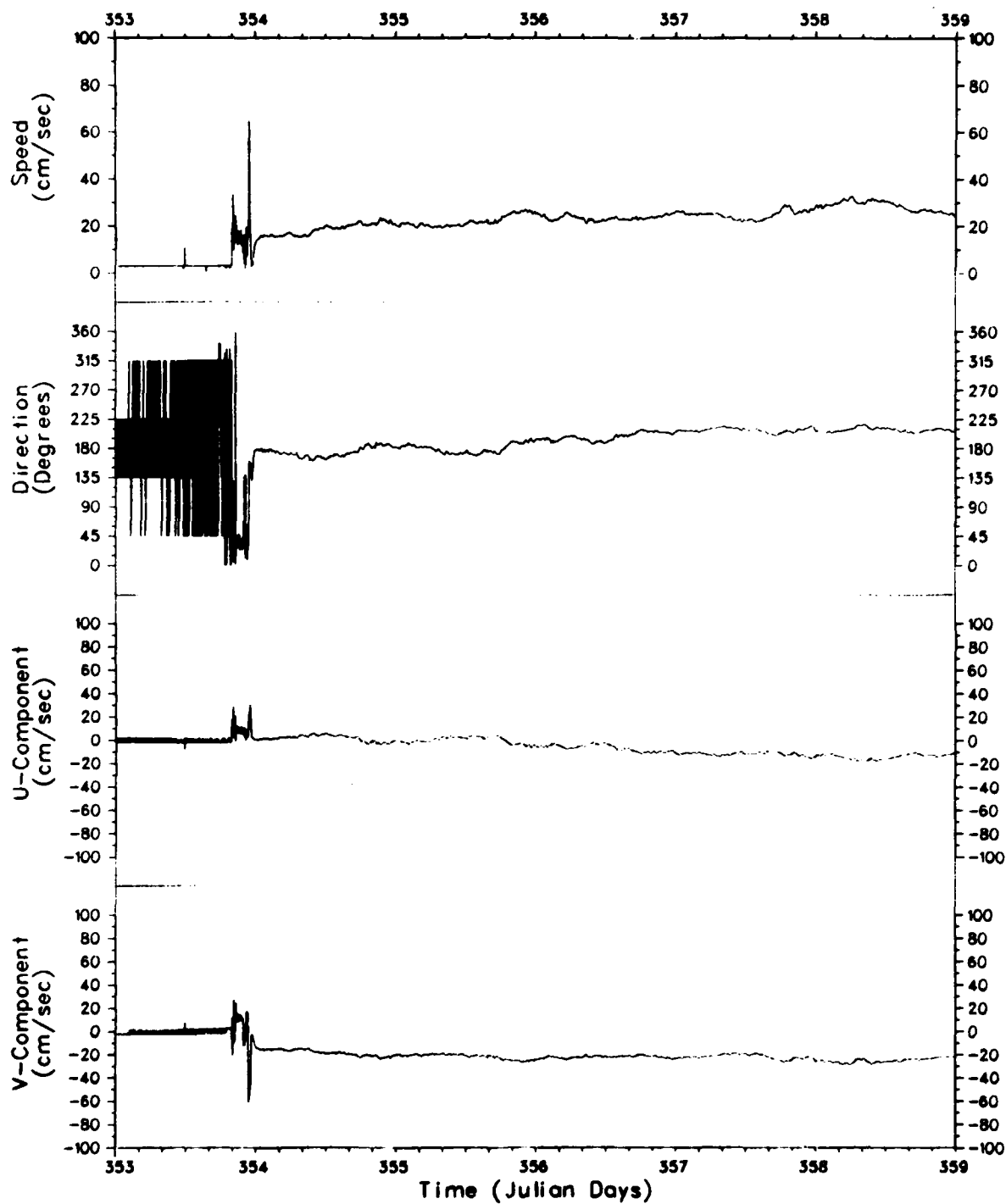
Figure 52.



File : VACMF
 Meter : 000289
 Latitude : 25.806
 Longitude :-89.7442

Array : ATOM79
 Depth : 500
 Start : 19 DEC 1979
 End : 14 JAN 1980

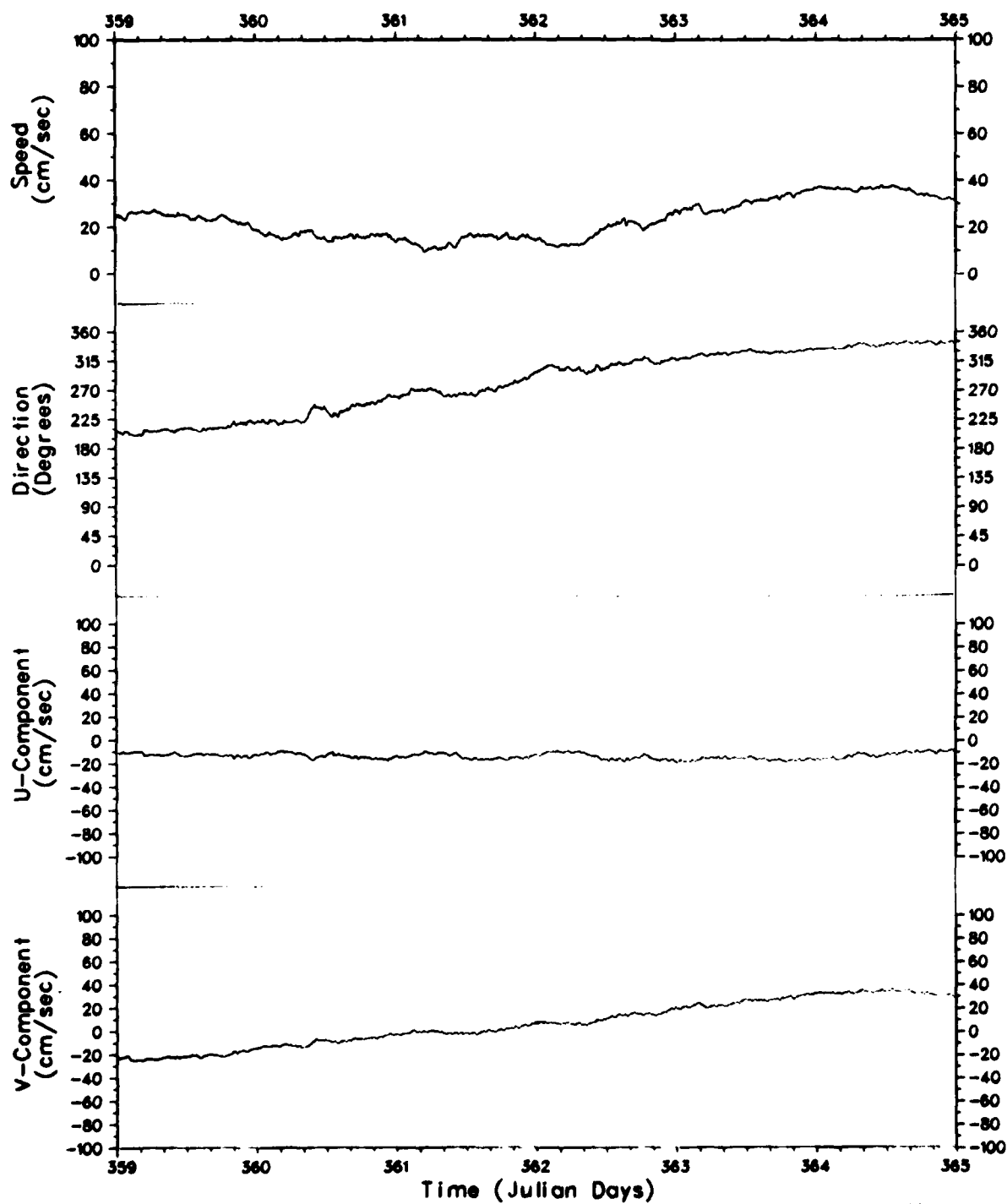
Figure 53.



File : VACMF
 Meter : 000298
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 1400
 Start : 19 DEC 1979
 End : 14 JAN 1980

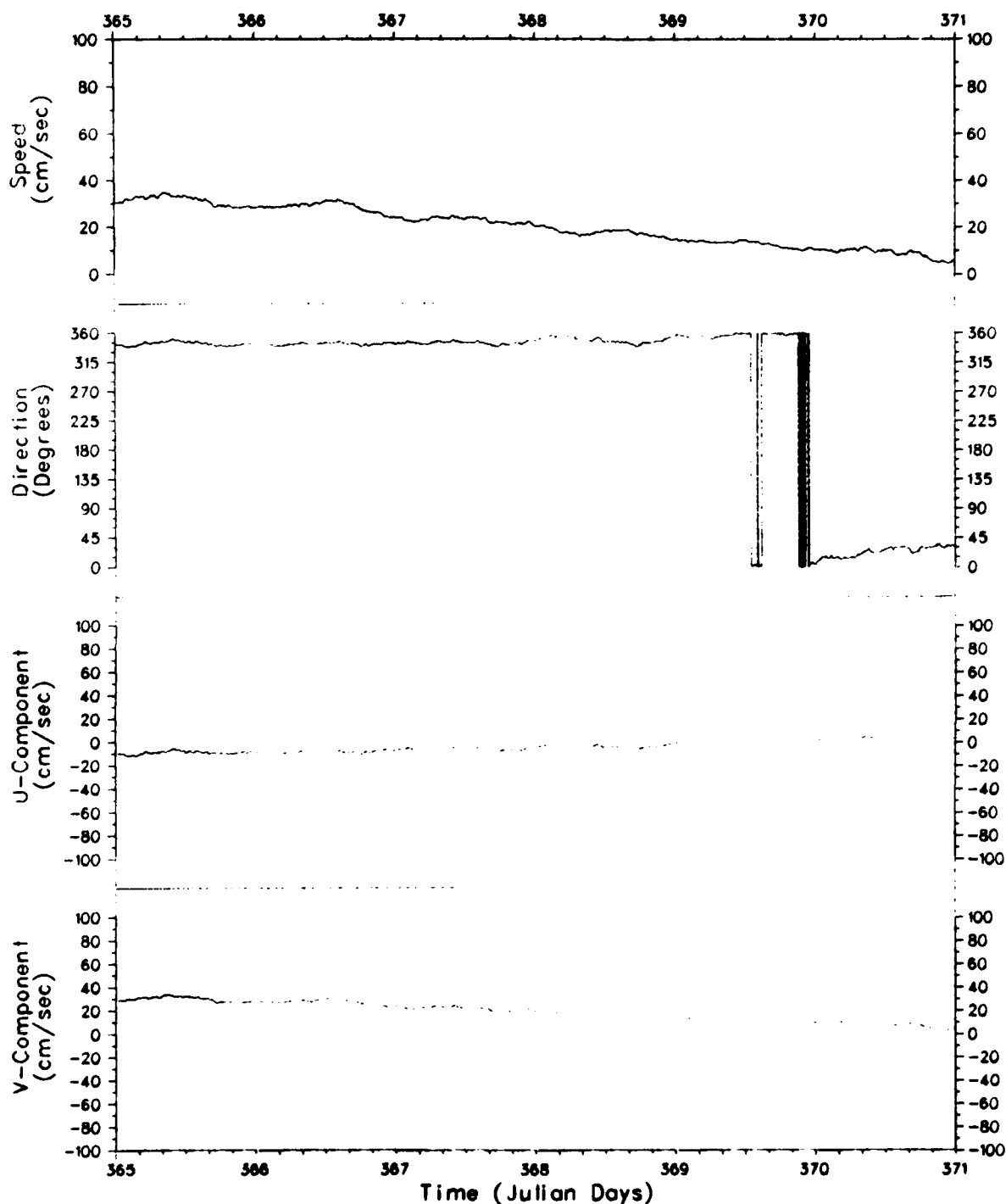
Figure 54.



File : VACMF
 Meter : 000298
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 1400
 Start : 19 DEC 1979
 End : 14 JAN 1980

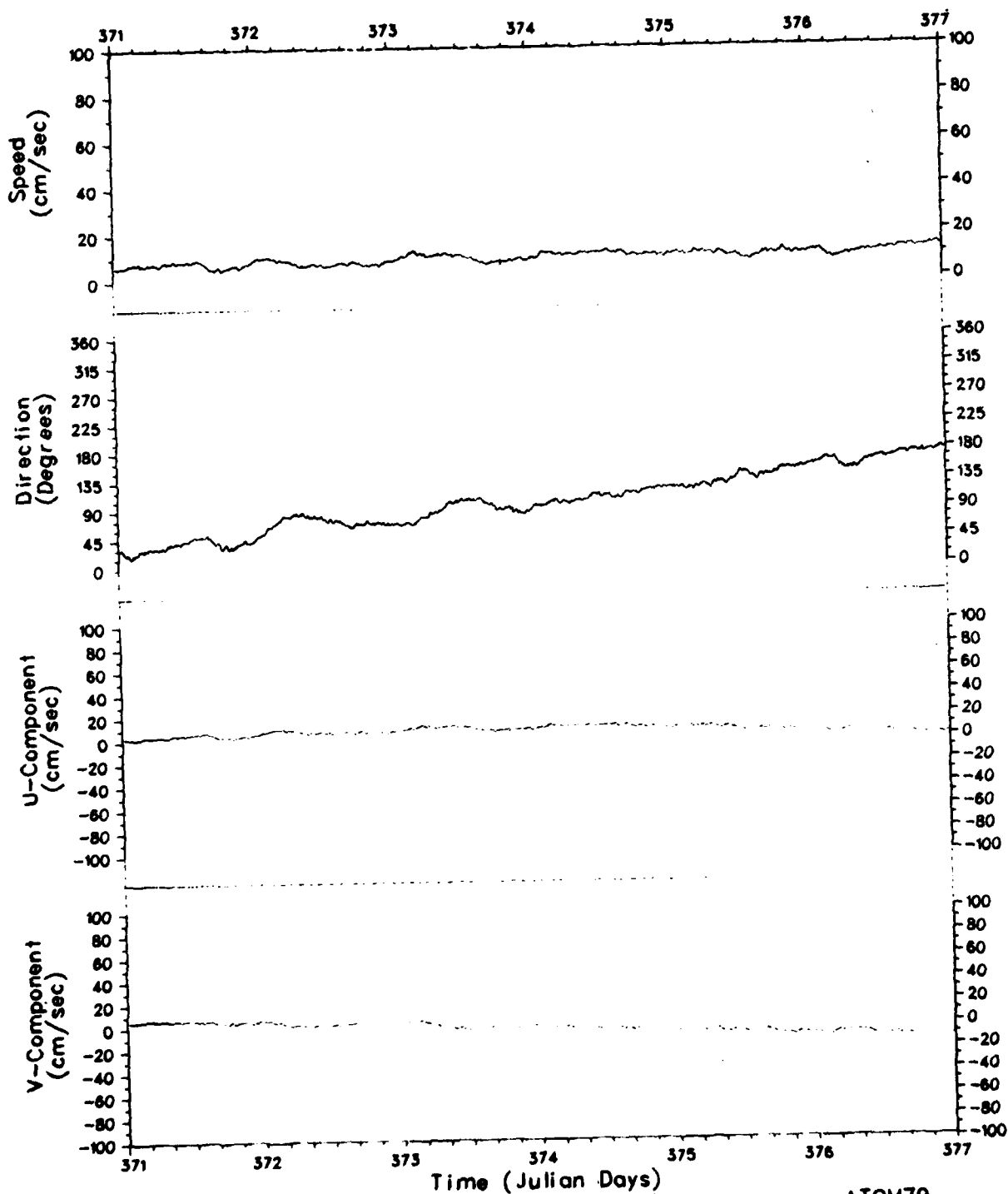
Figure 55.



File : VACMF
 Meter : 000298
 Latitude : 25.806
 Longitude :-89.7442

Array : ATOM79
 Depth : 1400
 Start : 19 DEC 1979
 End : 14 JAN 1980

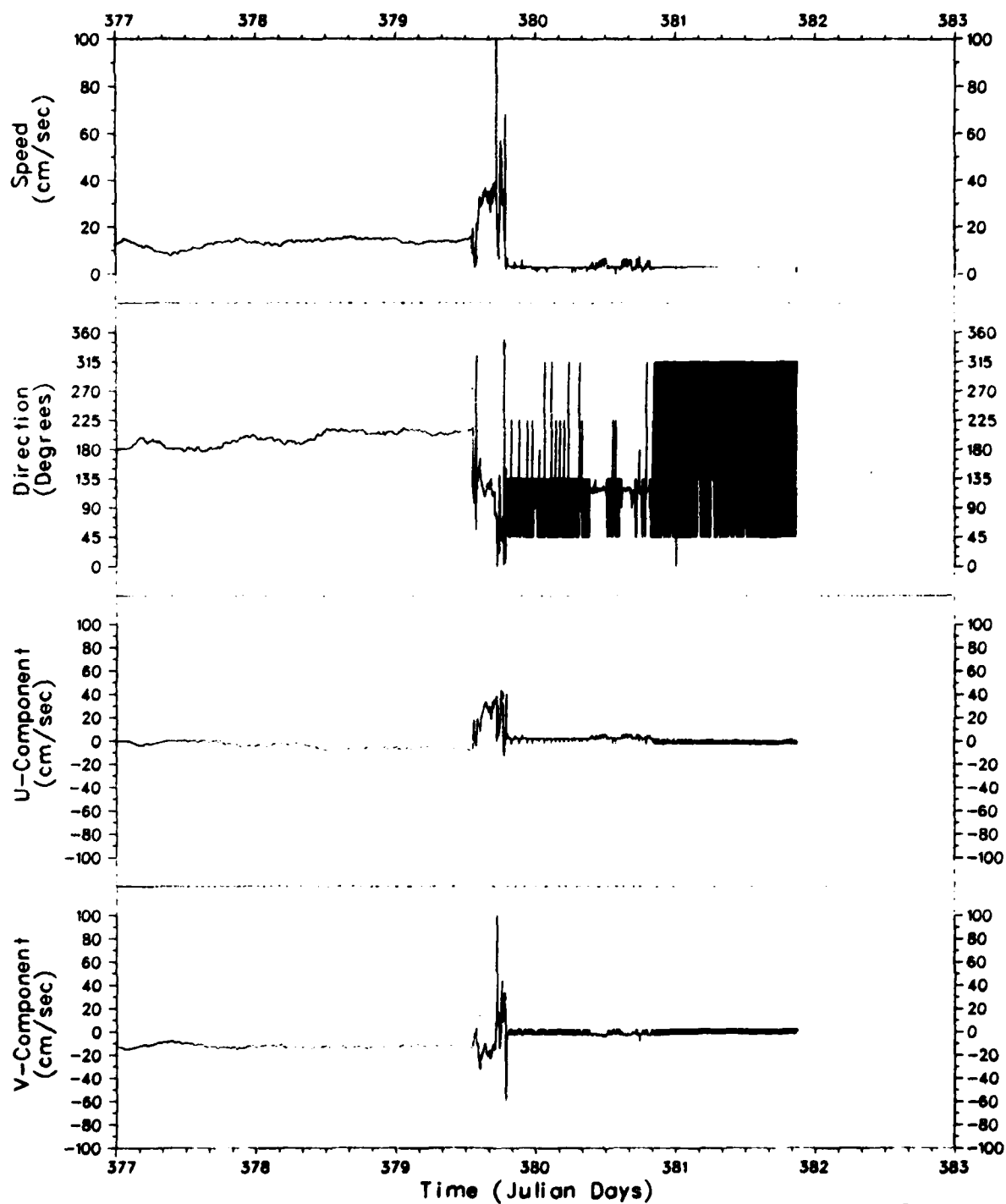
Figure 56.



File : VACMF
 Meter : 000298
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 1400
 Start : 19 DEC 1979
 End : 14 JAN 1980

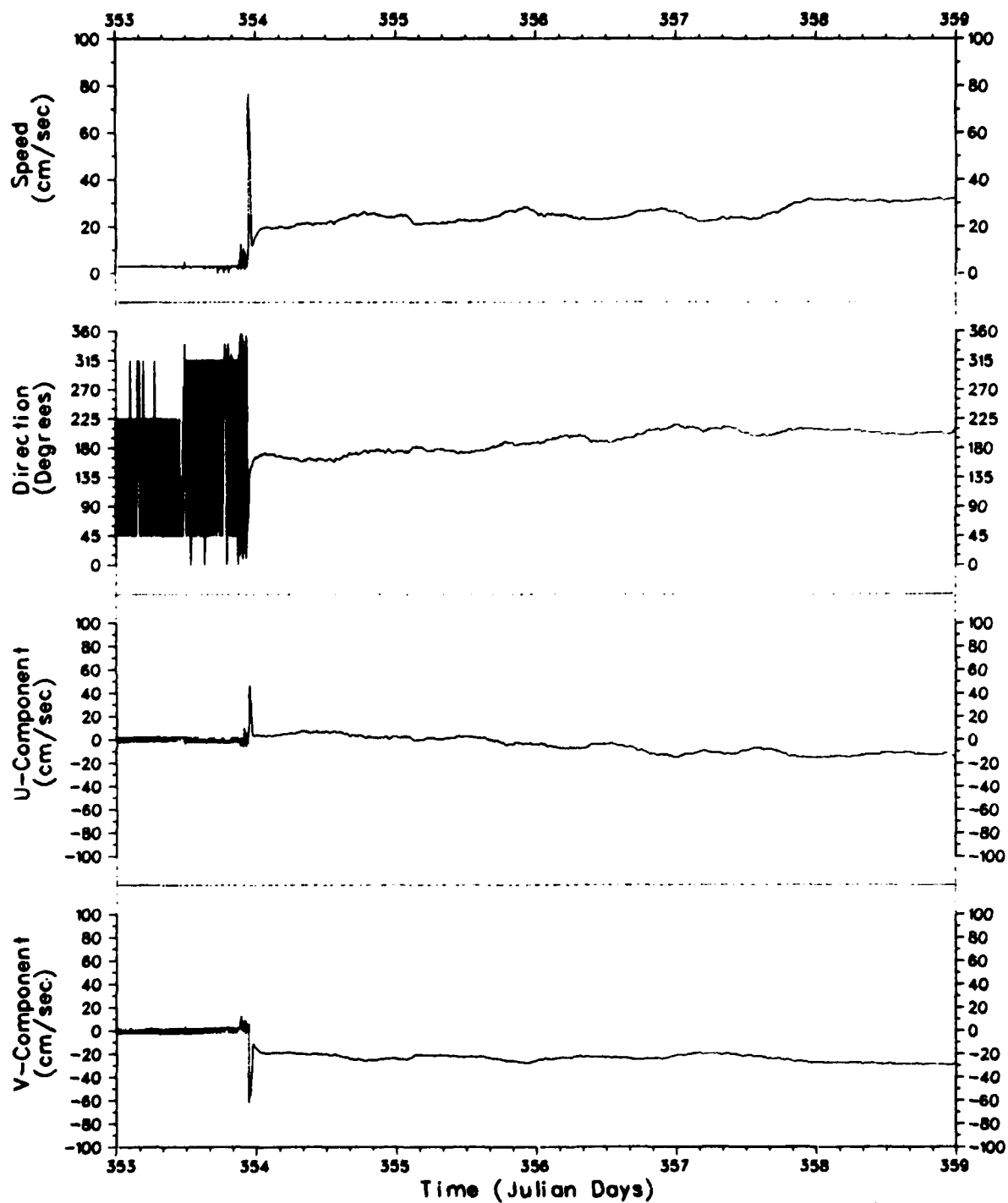
Figure 57.



File : VACMF
 Meter : 000298
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 1400
 Start : 19 DEC 1979
 End : 14 JAN 1980

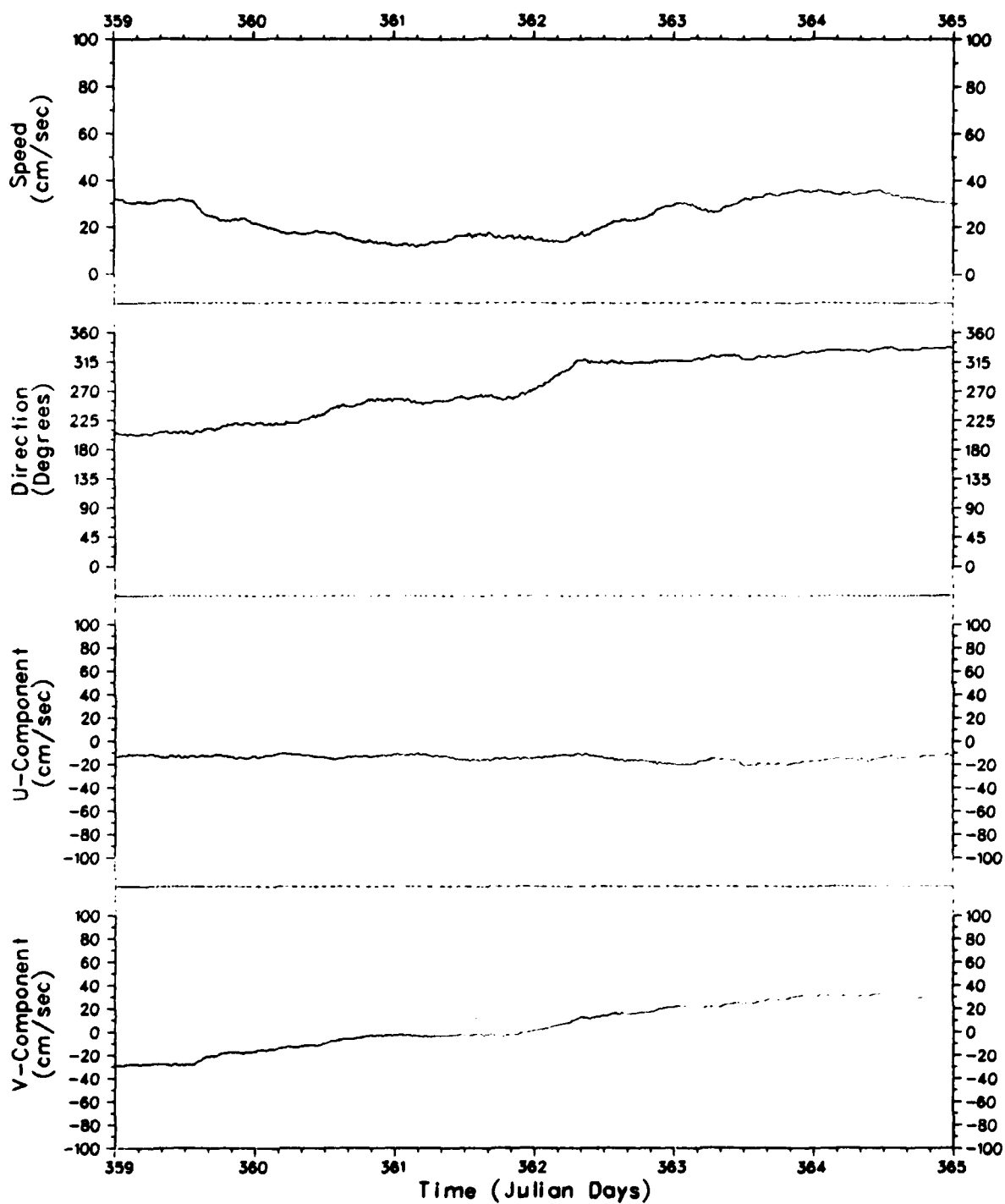
Figure 58.



File : VACMF
 Meter : 000300
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 2400
 Start : 19 DEC 1979
 End : 14 JAN 1980

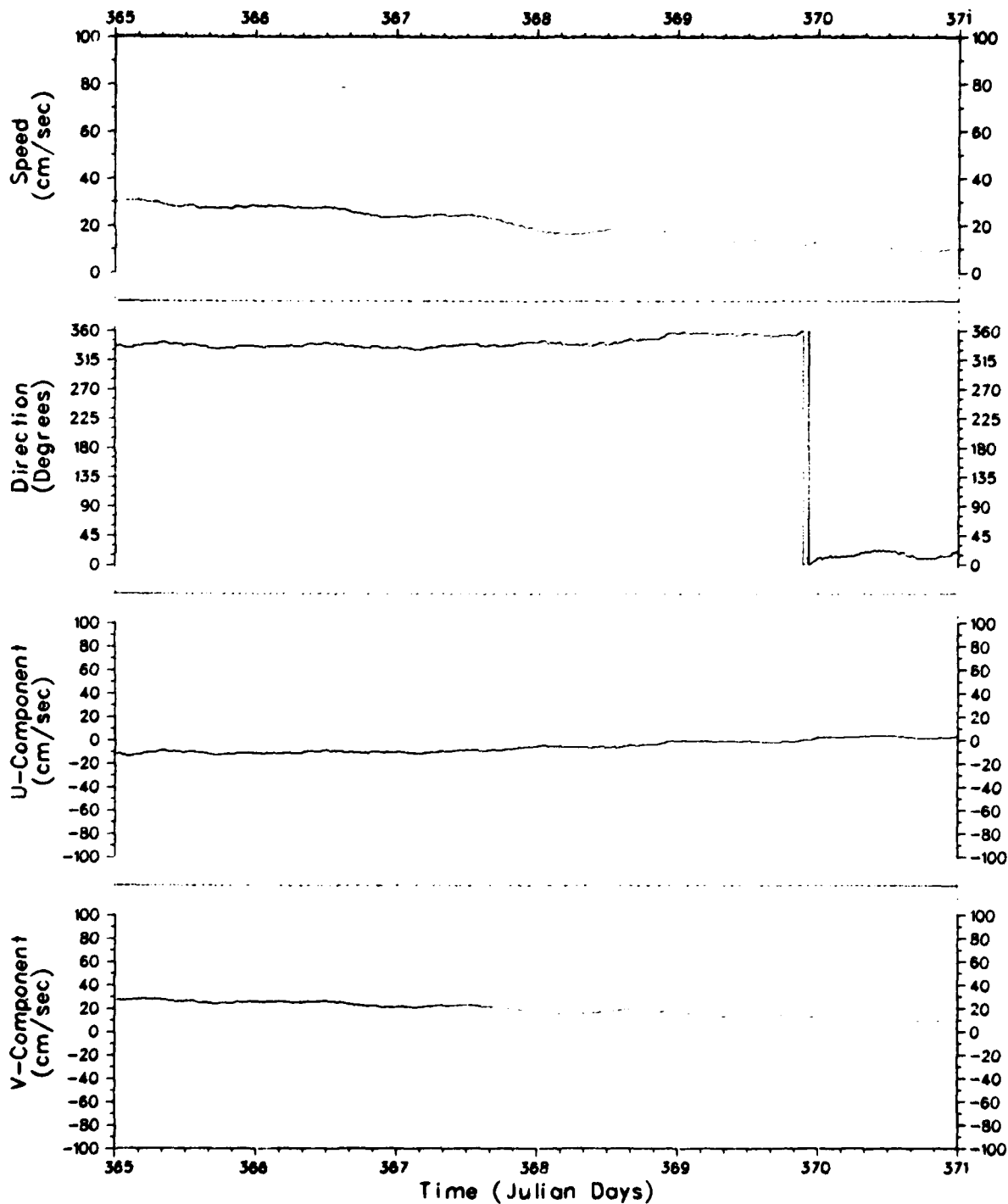
Figure 59.



File : VACMF
 Meter : 000300
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 2400
 Start : 19 DEC 1979
 End : 14 JAN 1980

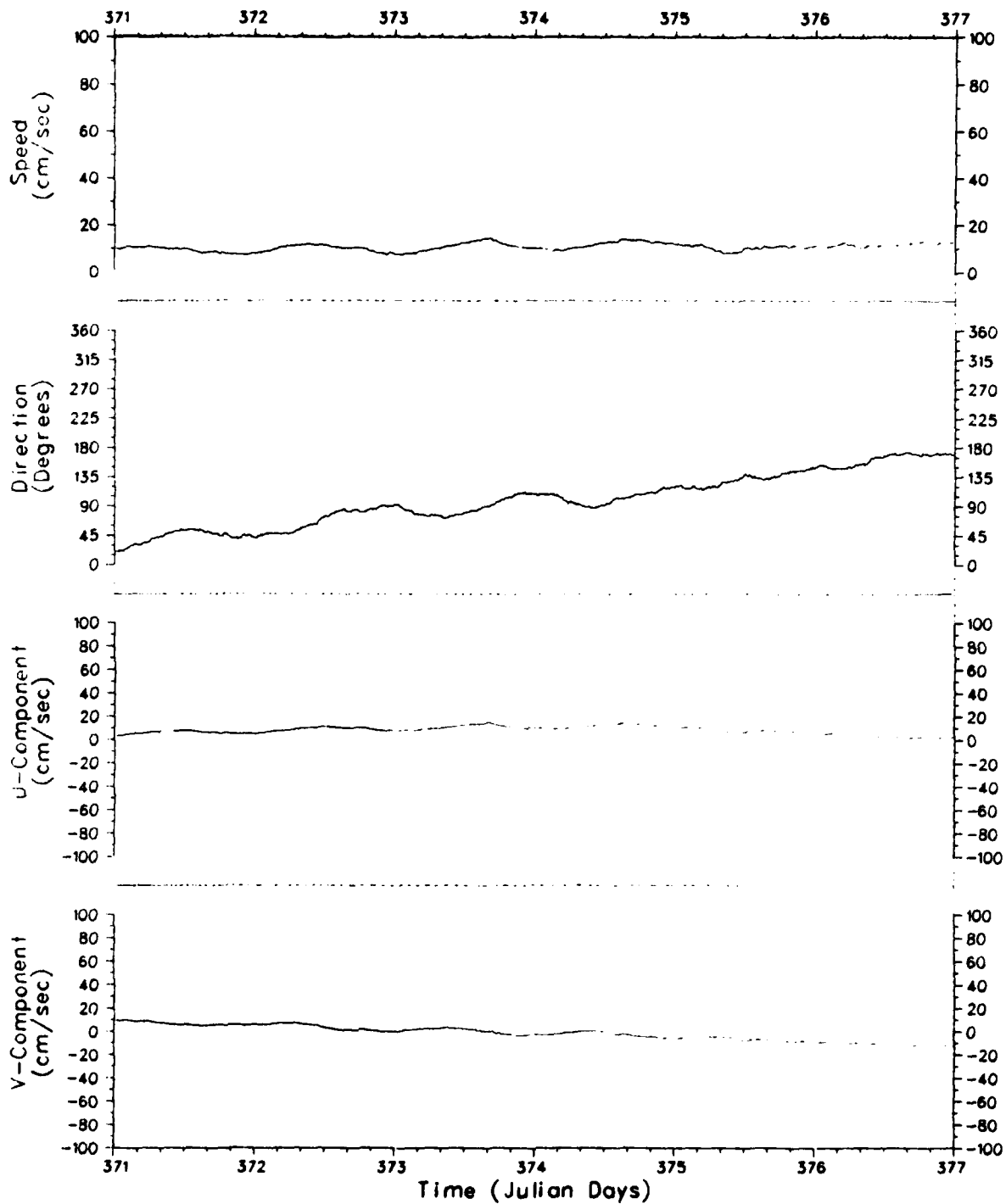
Figure 60.



File : VACMF
 Meter : 000300
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 2400
 Start : 19 DEC 1979
 End : 14 JAN 1980

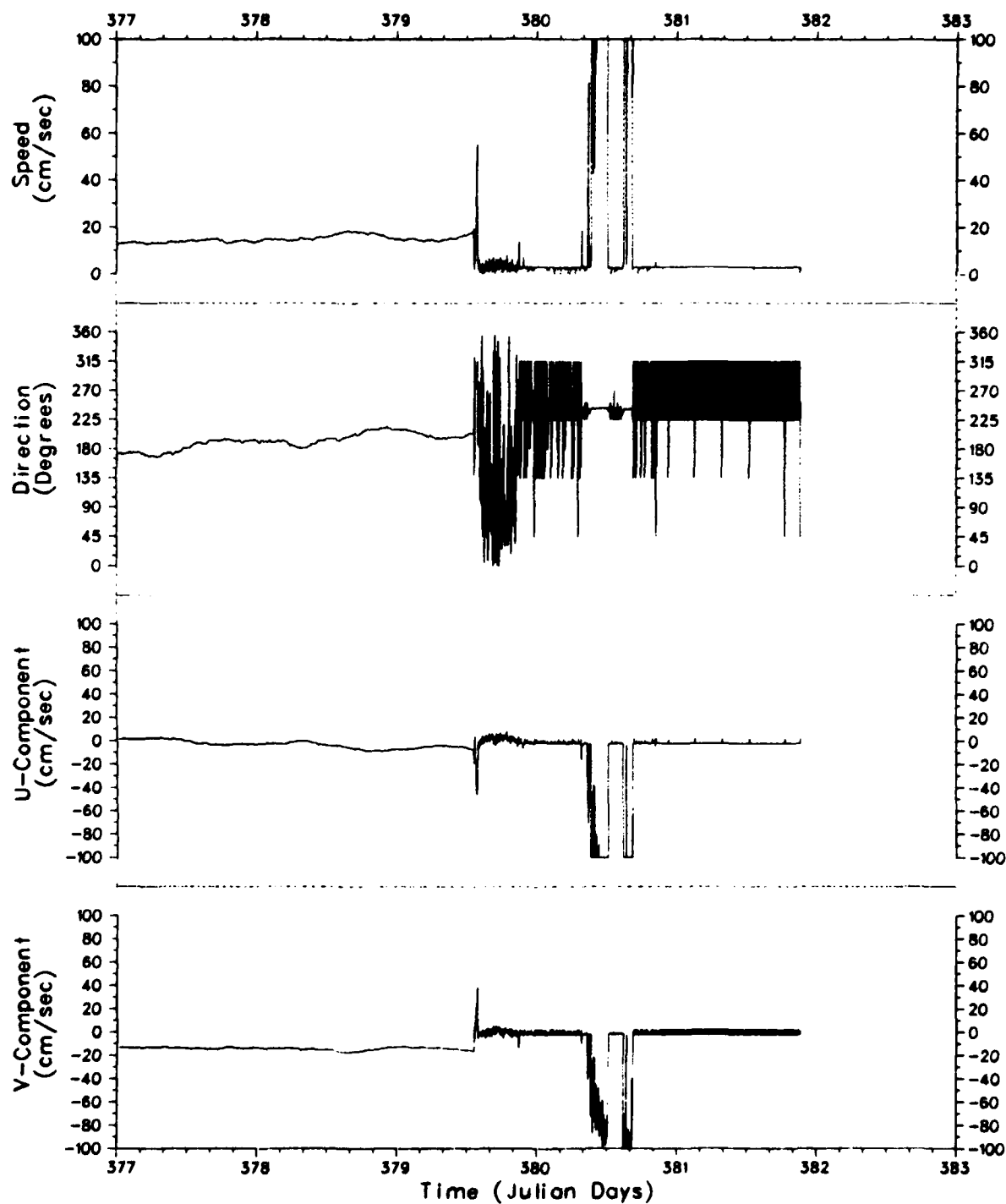
Figure 61.



File : VACMF
 Meter : 000300
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 2400
 Start : 19 DEC 1979
 End : 14 JAN 1980

Figure 62.



File : VACMF
 Meter : 000300
 Latitude : 25.806
 Longitude : -89.7442

Array : ATOM79
 Depth : 2400
 Start : 19 DEC 1979
 End : 14 JAN 1980

Figure 63.

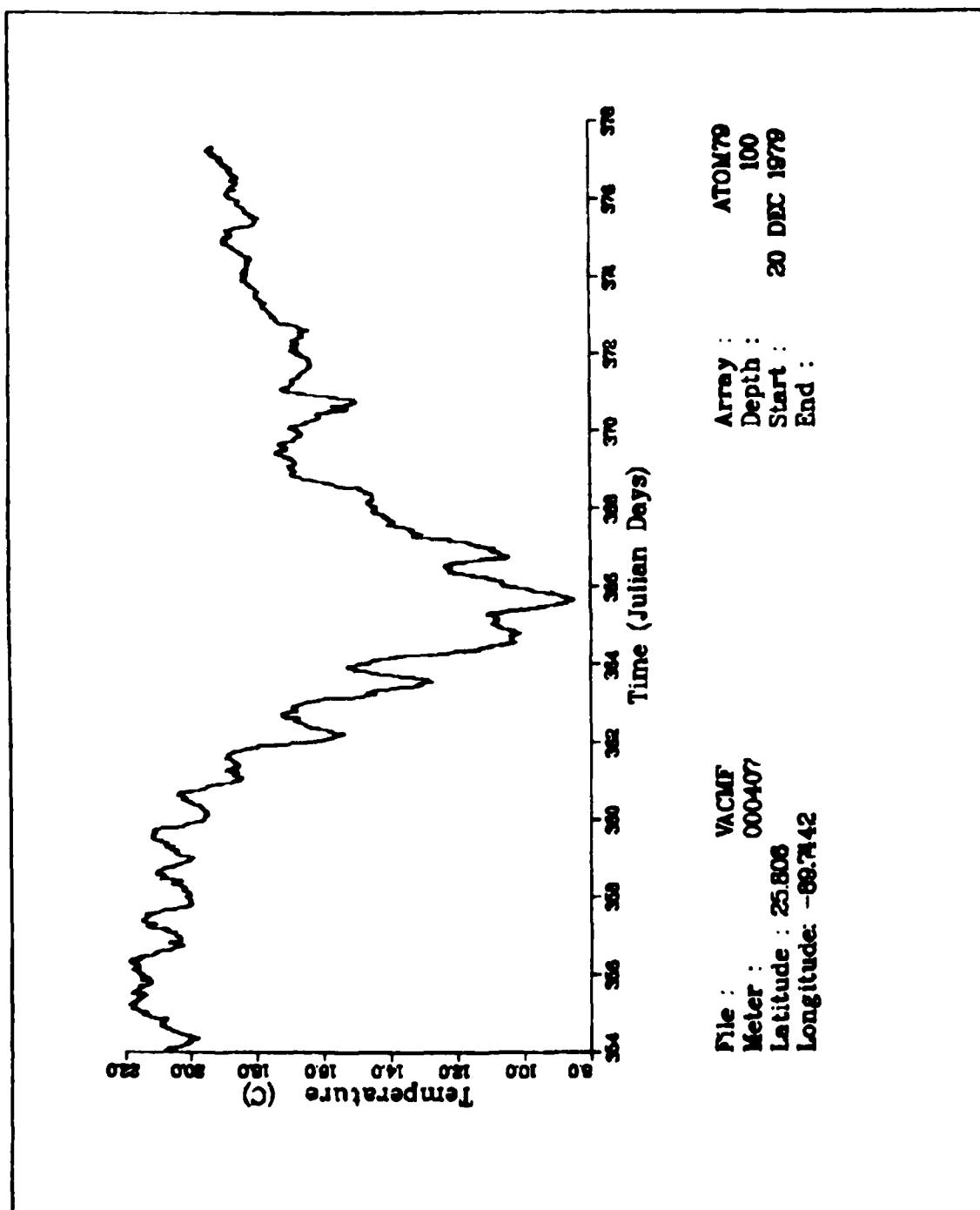


Figure 64.

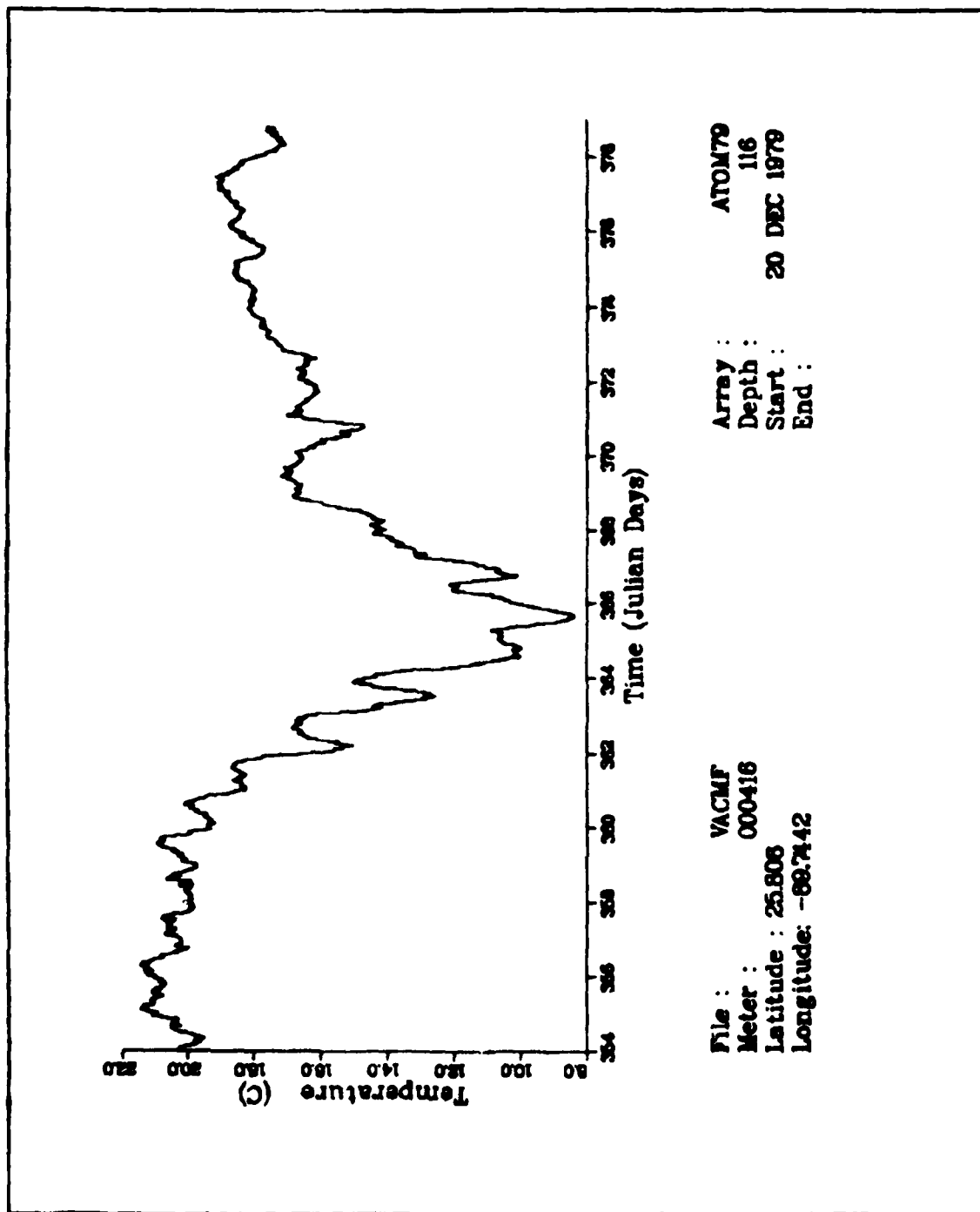


Figure 65.

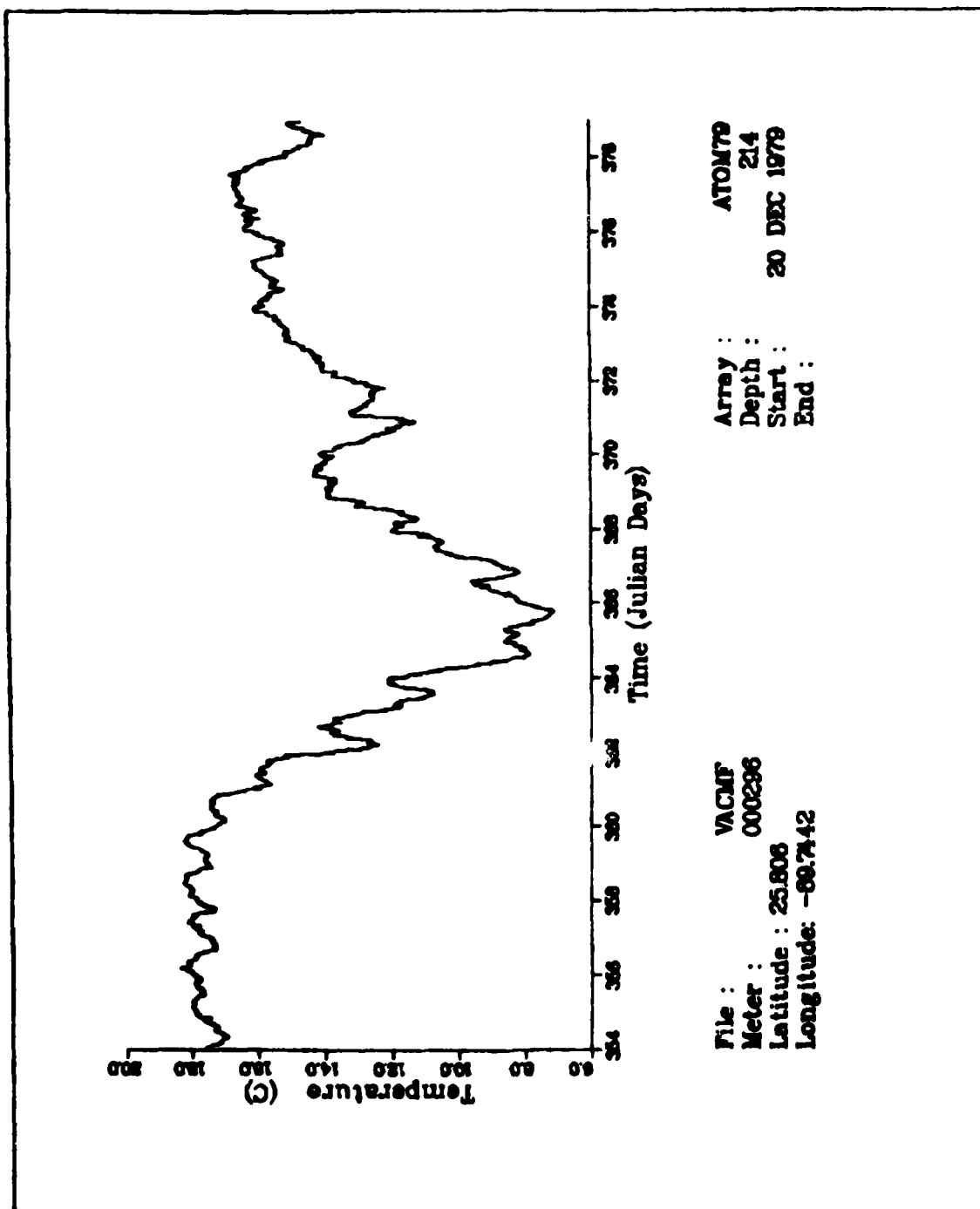


Figure 66.

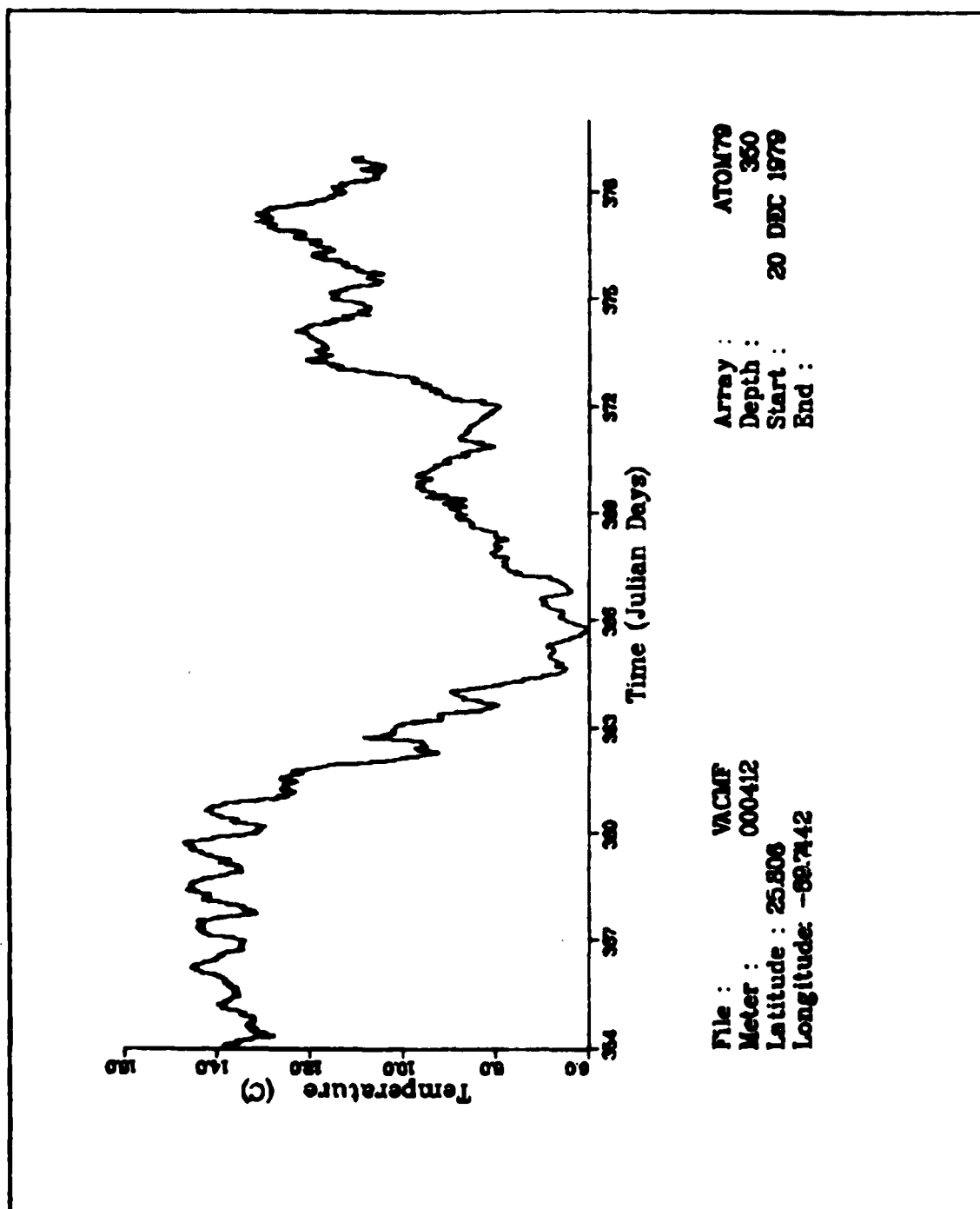


Figure 67.

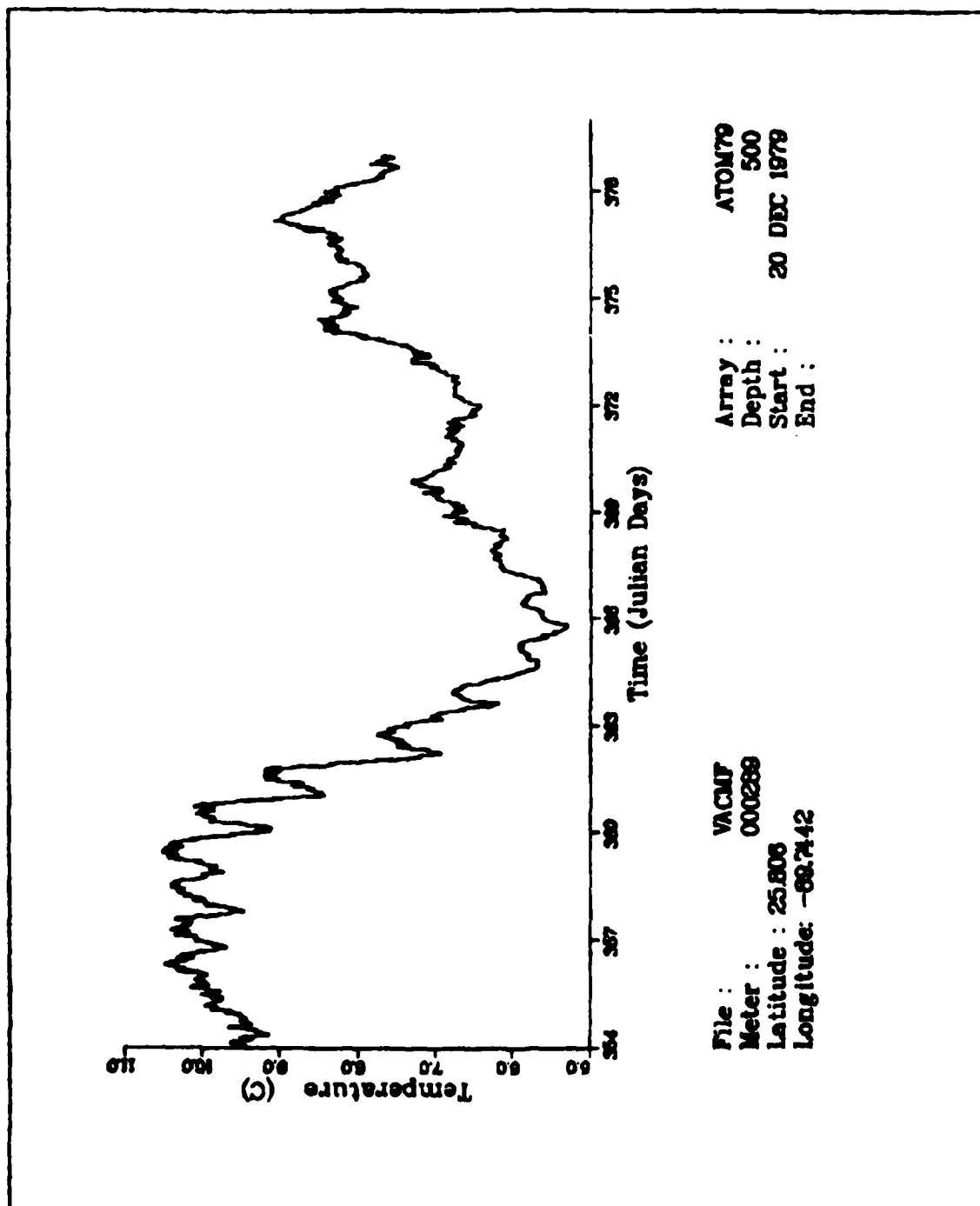


Figure 68.

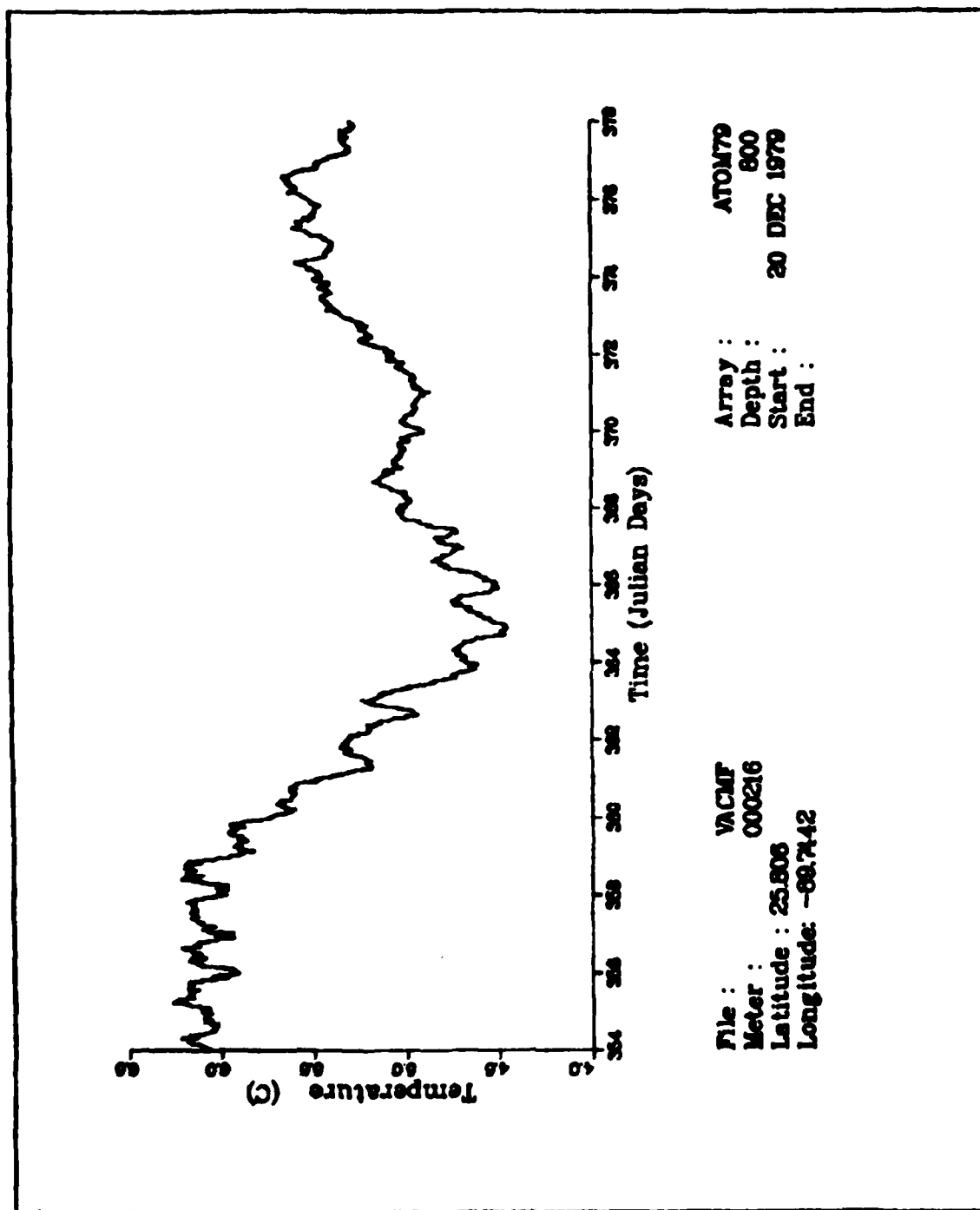


Figure 69.

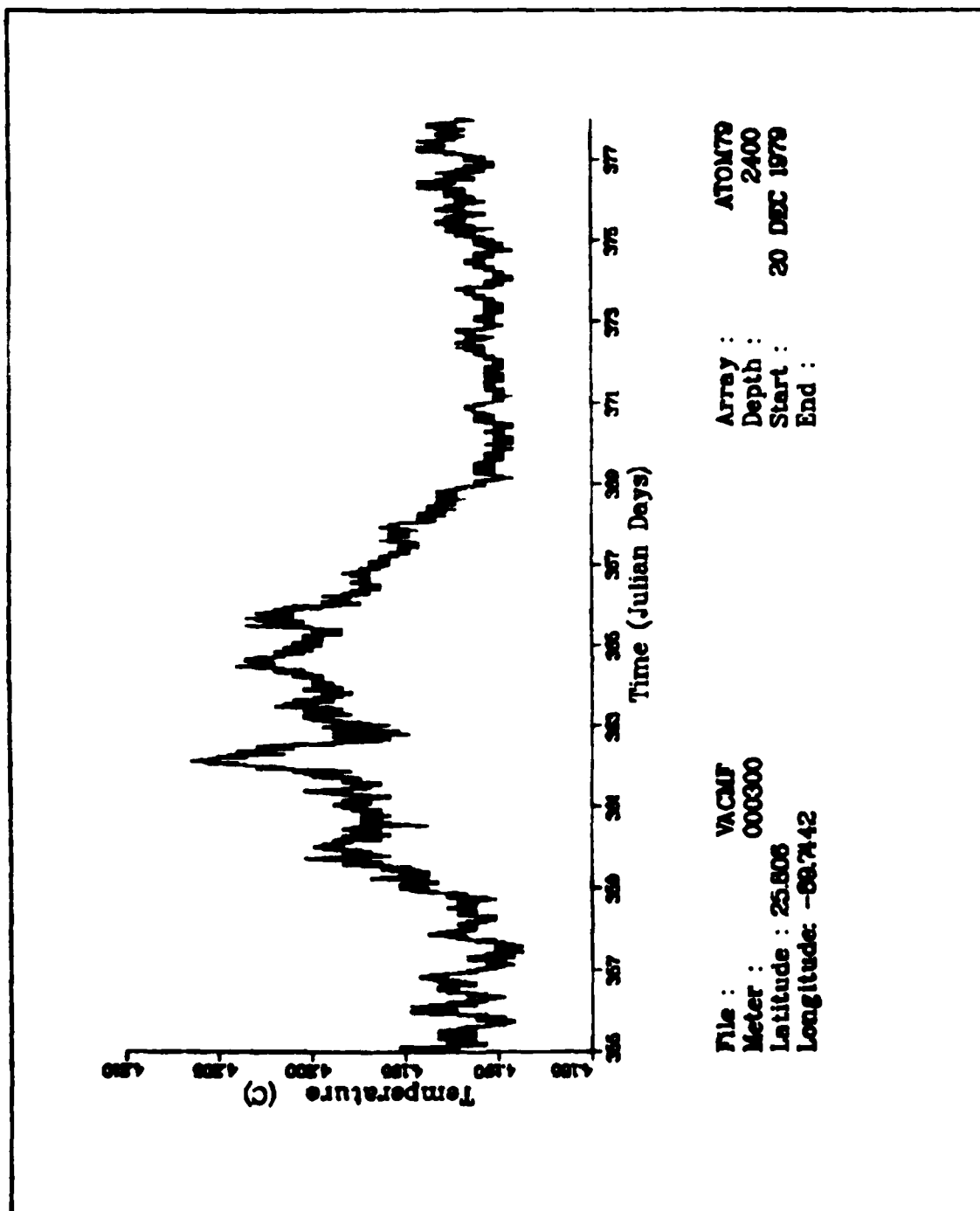
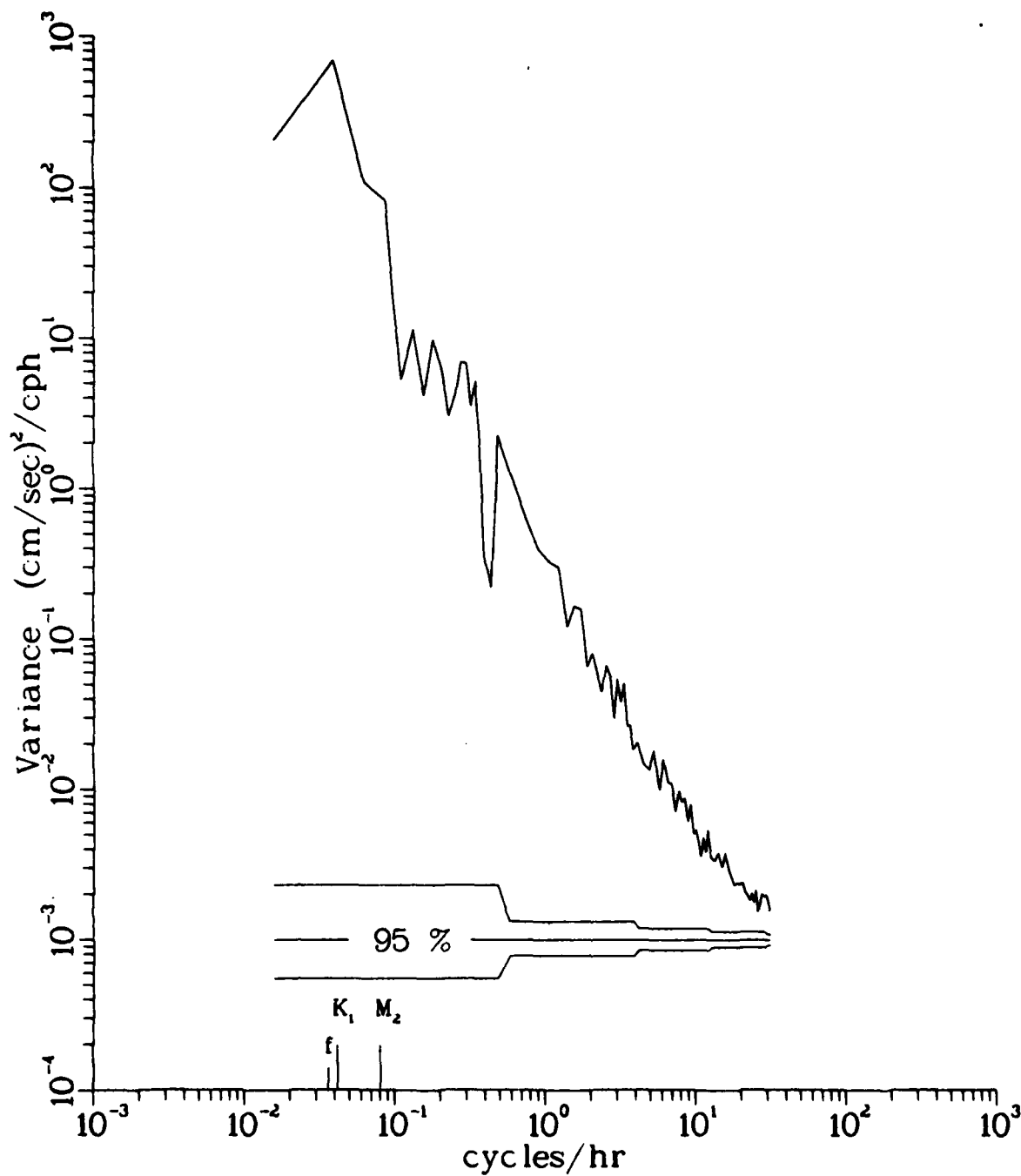


Figure 70.

CURRENT SPECTRUM

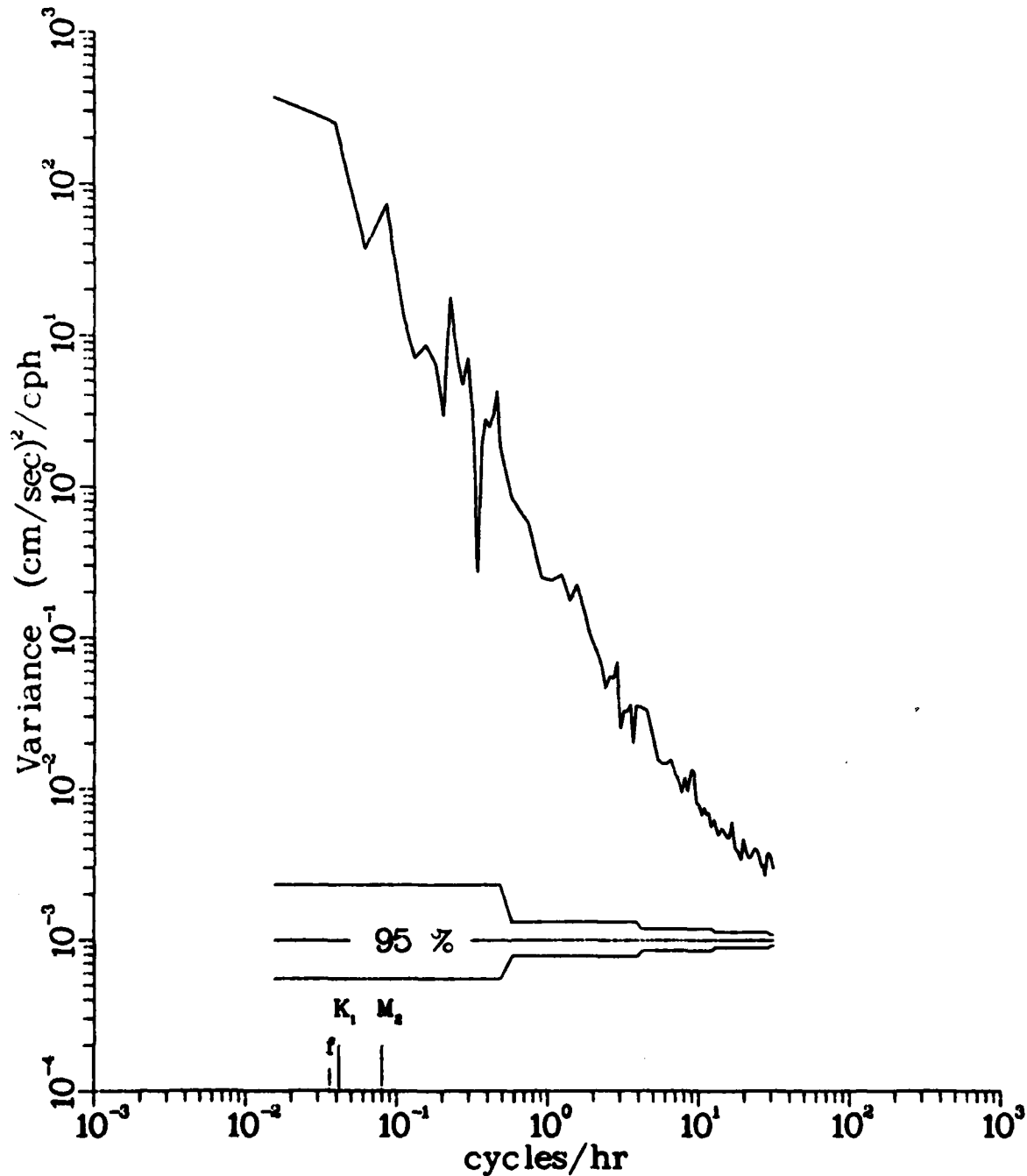


Variable : U
File : VACMF
Meter : 000407
Lat : 25 806
Long : -89 7442

Array : ATOM79
Depth : 100
Start : 20 DEC 1979
End : 25 DEC 1979

Figure 71.

CURRENT SPECTRUM

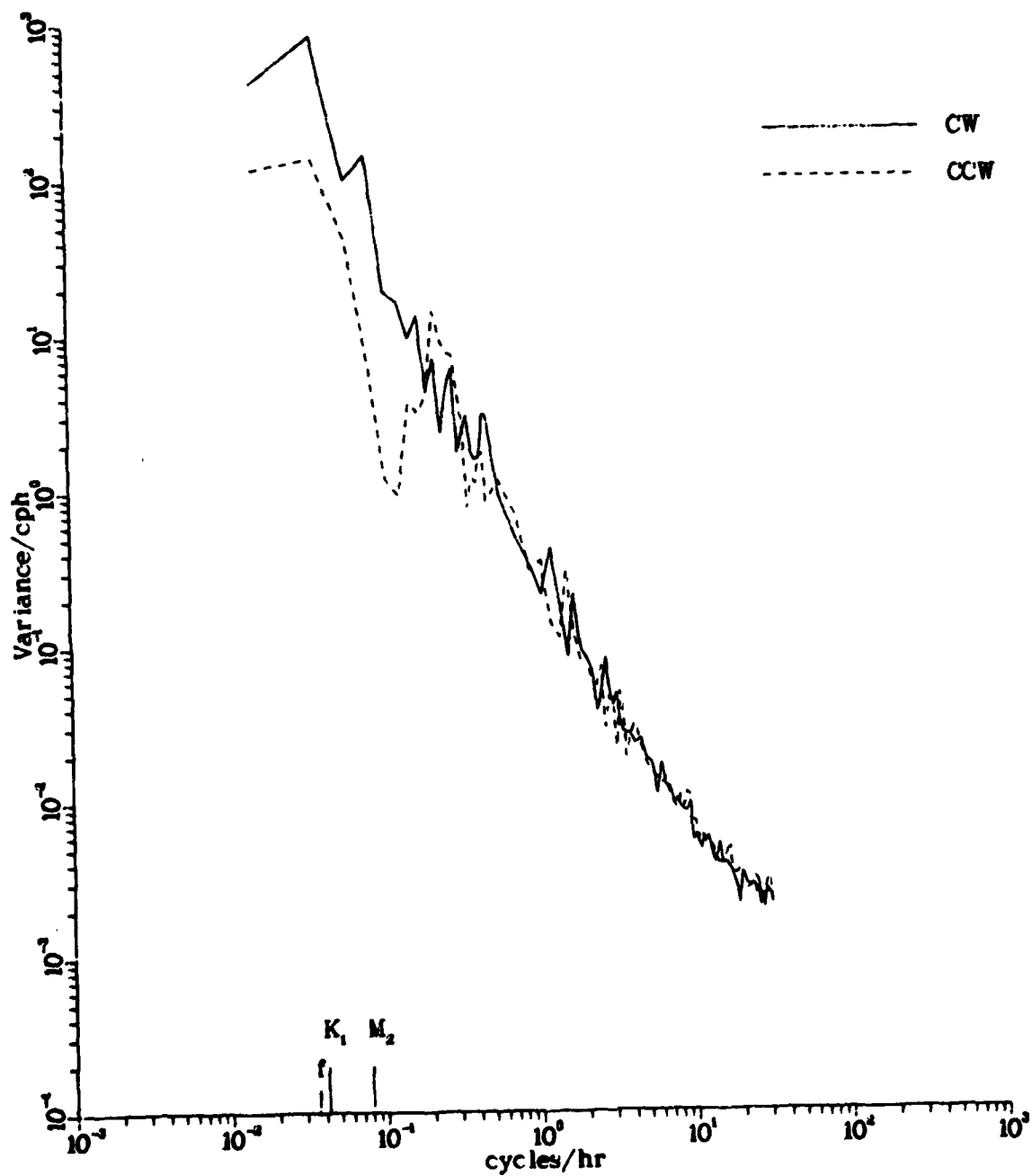


Variable : V
 File : VACMF
 Meter : 000407
 Lat. : 25.808
 Long : -89.7442

Array : ATOM79
 Depth : 100
 Start : 19 DEC 1900
 End : 24 DEC 1900

Figure 72.

ROTARY SPECTRUM

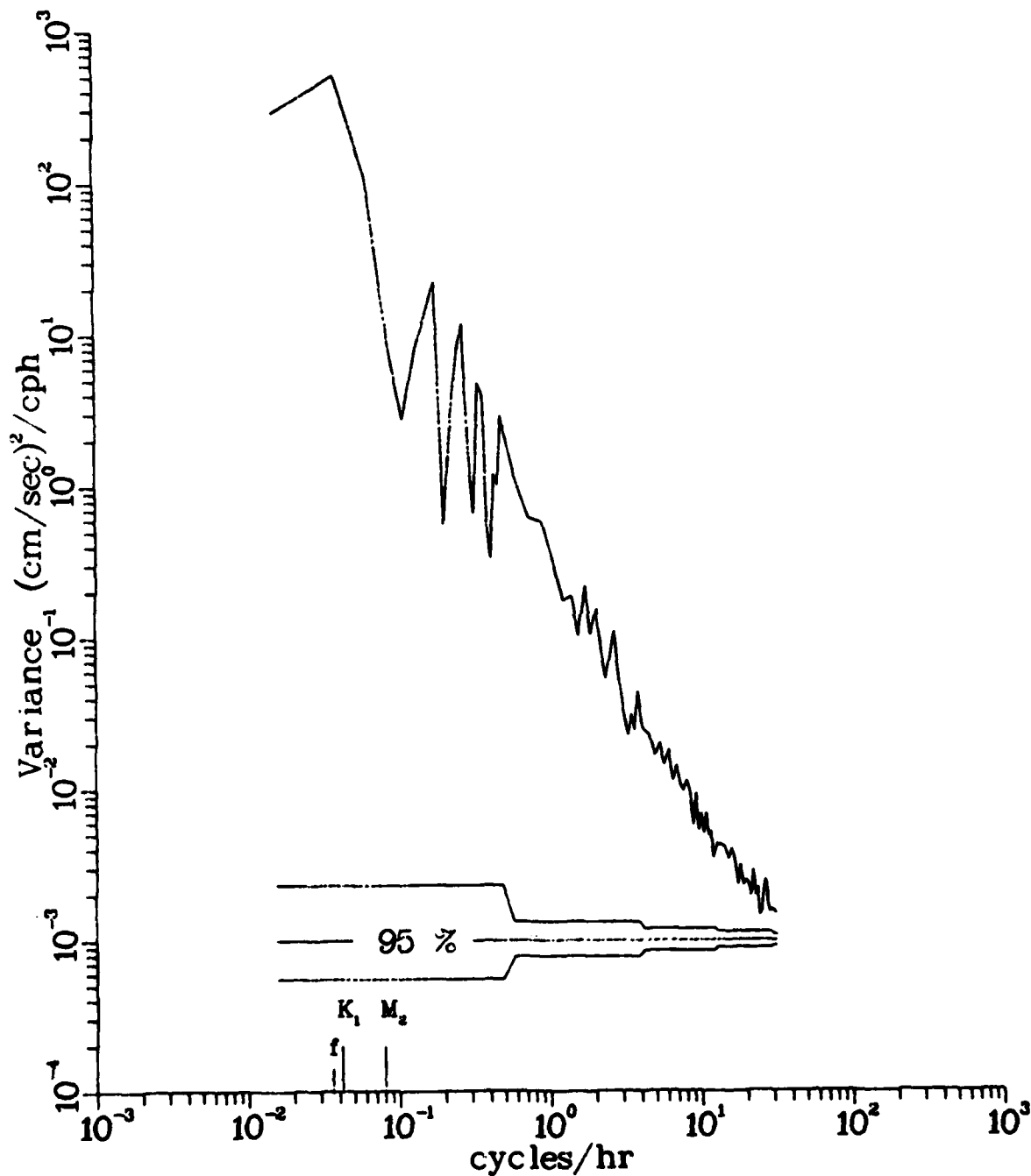


Variable : U
 Depth : 100
 Meter : 000407
 Lat : 25 808
 Long : -89 7442

Variable : V
 Depth : 100
 Meter : 000407
 Lat : 25 808
 Long : -89 7442

Figure 73.

CURRENT SPECTRUM

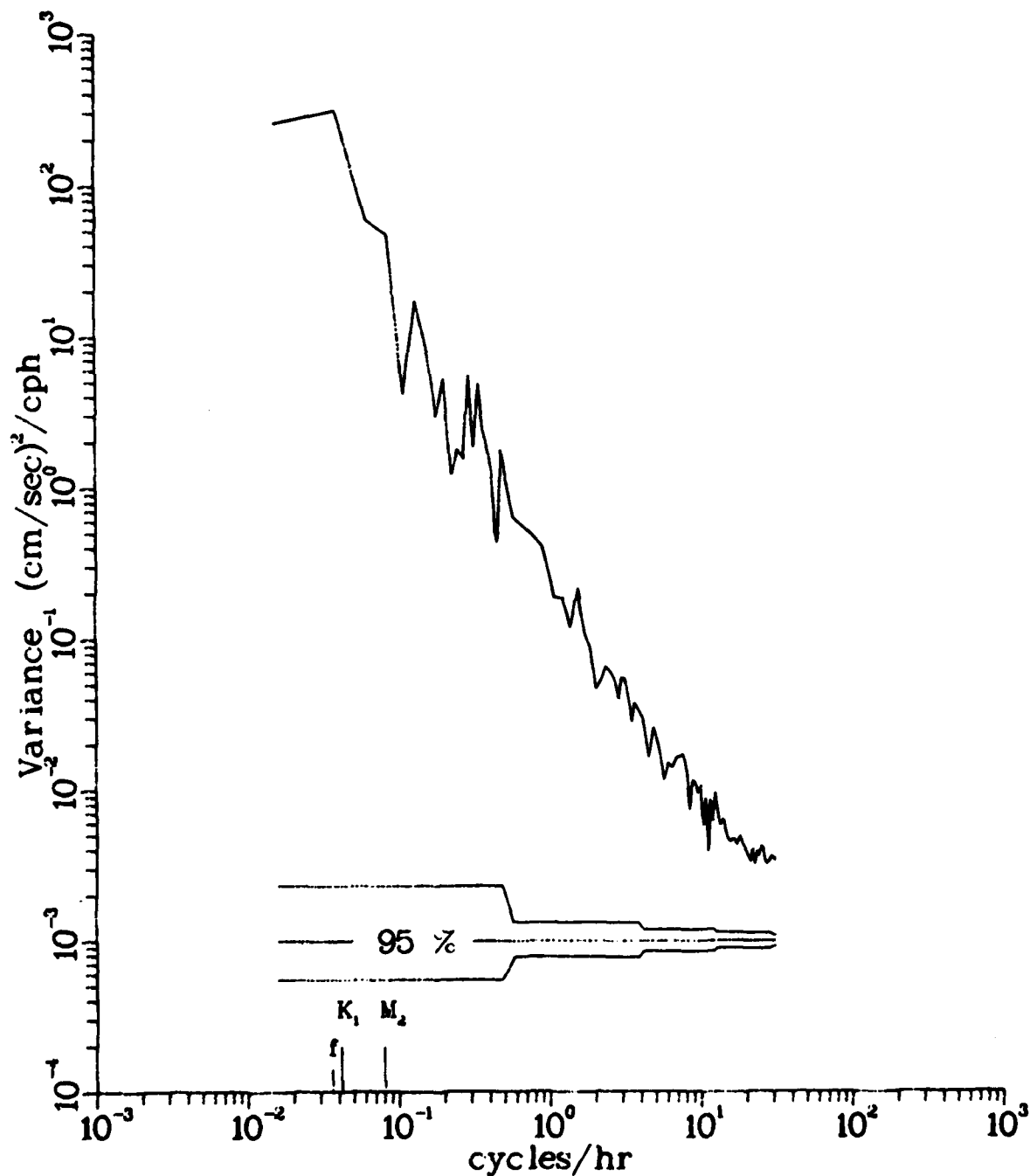


Variable : U
 File : VACMF
 Meter : 000418
 Lat. : 25.808
 Long : -89.7442

Array : ATOM79
 Depth : 116
 Start : 19 DEC 1900
 End : 24 DEC 1900

Figure 74.

CURRENT SPECTRUM

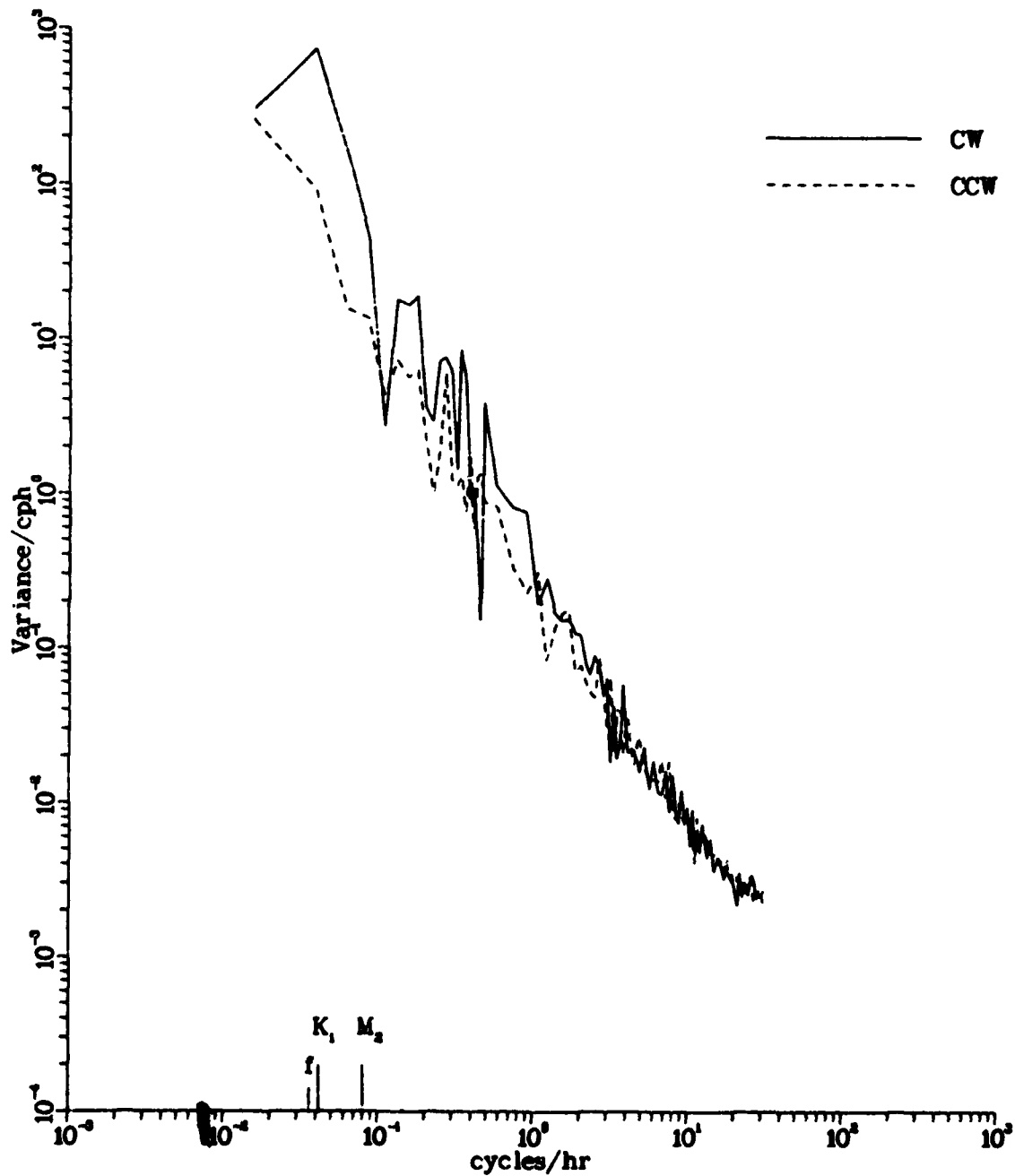


Variable : V
 File : VACMF
 Meter : 000416
 Lat. : 25.806
 Long : -89.7442

Array : ATOM79
 Depth : 116
 Start : 19 DEC 1900
 End : 24 DEC 1900

Figure 75.

ROTARY SPECTRUM

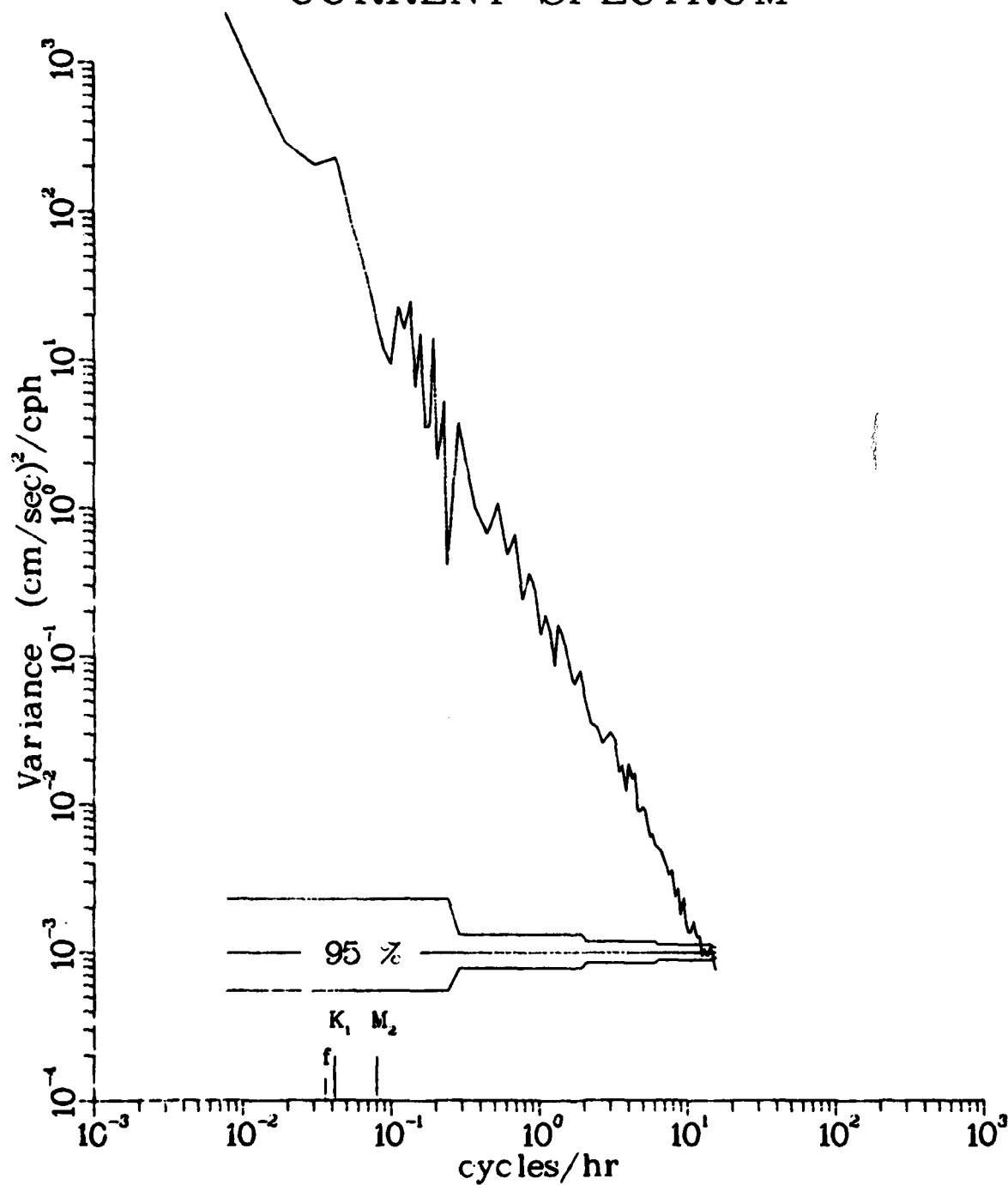


Variable : U
 Depth : 116
 Meter : 000416
 Lat. : 25.806
 Long : -89.7442

Variable : V
 Depth : 116
 Meter : 000416
 Lat. : 25.806
 Long : -89.7442

Figure 76.

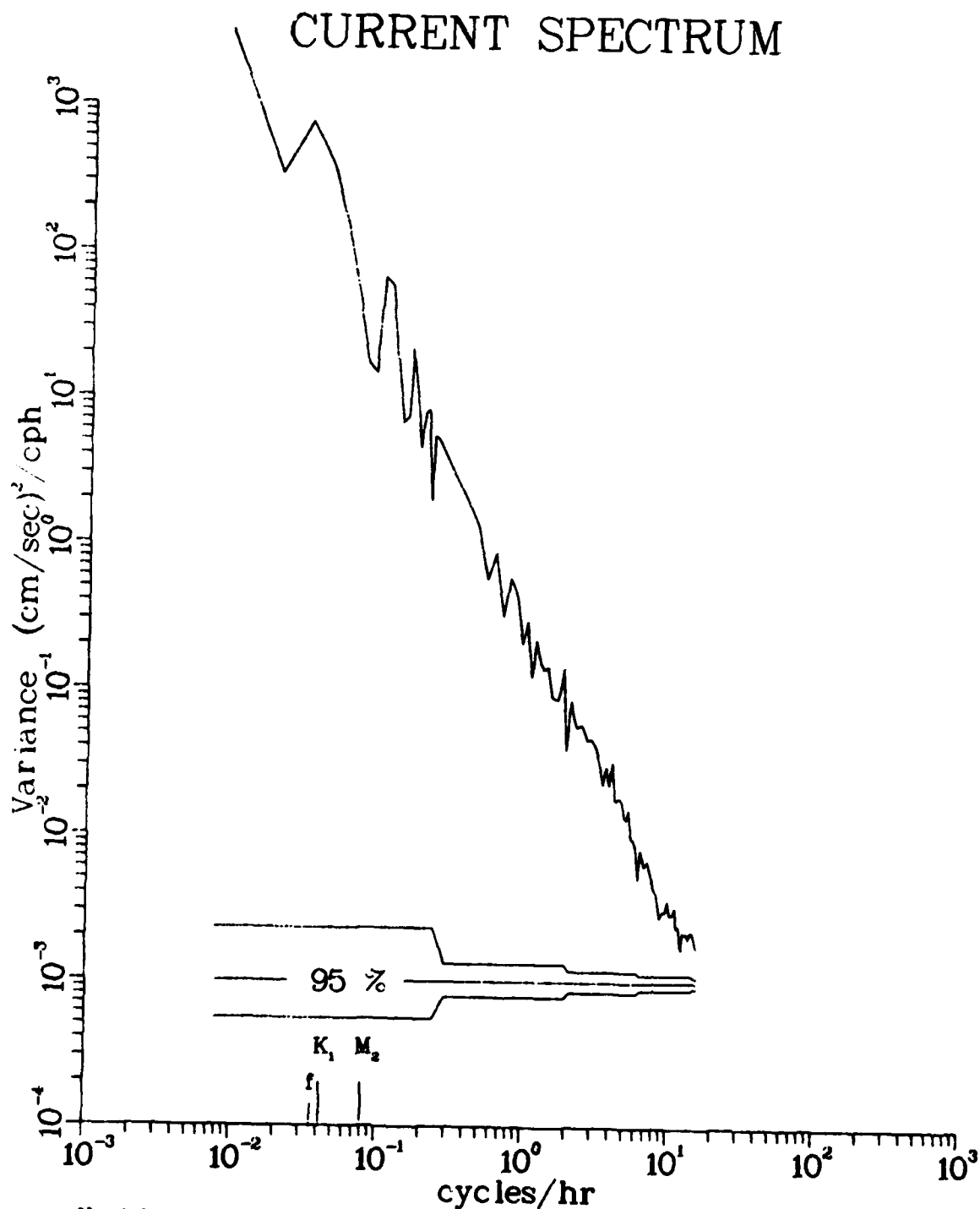
CURRENT SPECTRUM



Variable U
File VACMF
Meter 000296
Lat. 25.806
Long -89.7442

Array ATOM79
Depth 214
Start 19 DEC 1900
End 29 DEC 1900

Figure 77.



Variable : V
 File : VACMF
 Meter : 000296
 Lat. : 25.808
 Long : -89.7442

Array : ATOM79
 Depth : 214
 Start : 19 DEC 1900
 End : 29 DEC 1900

Figure 78.

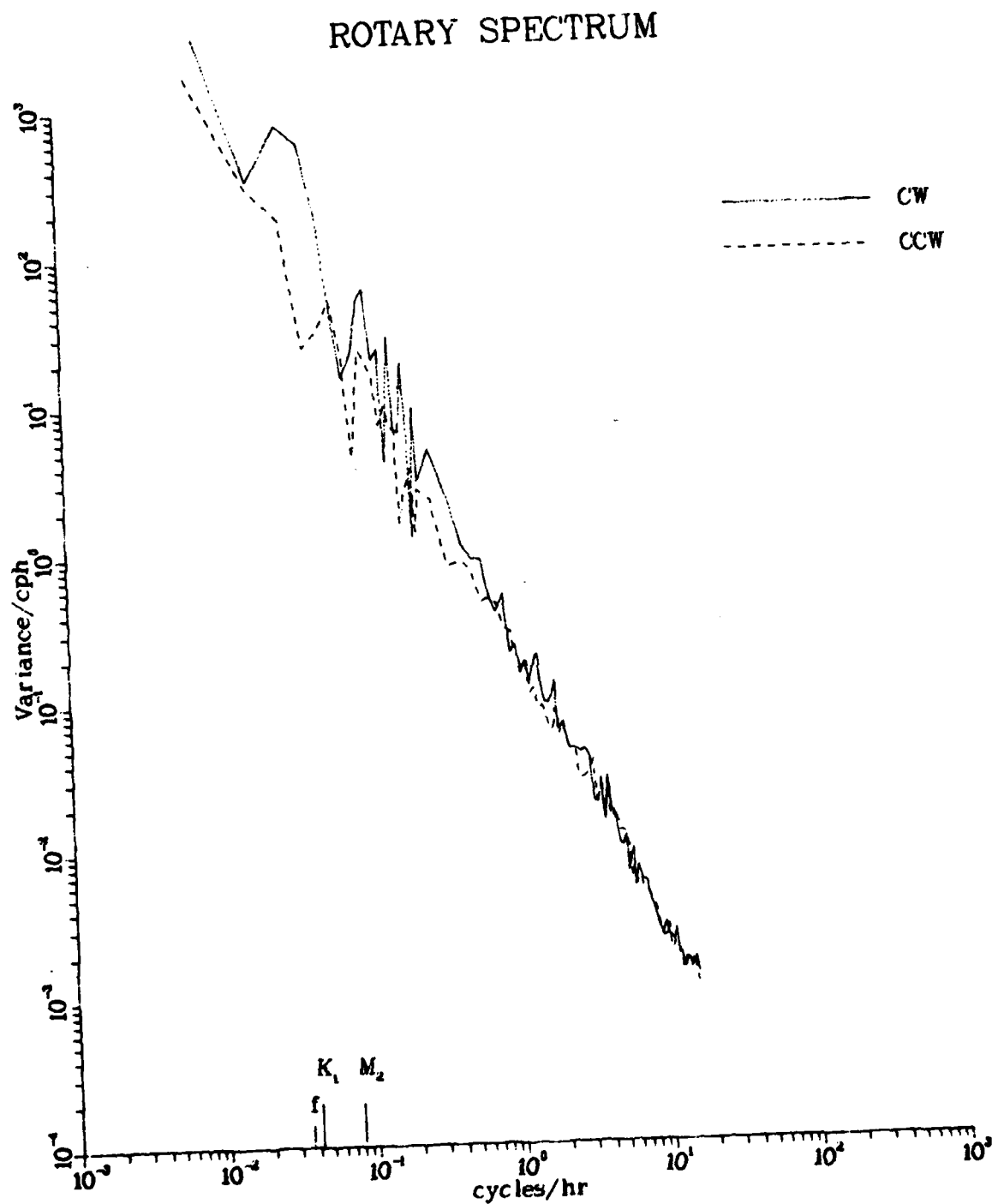
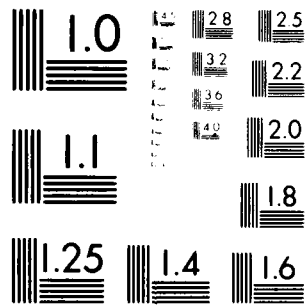


Figure 79.

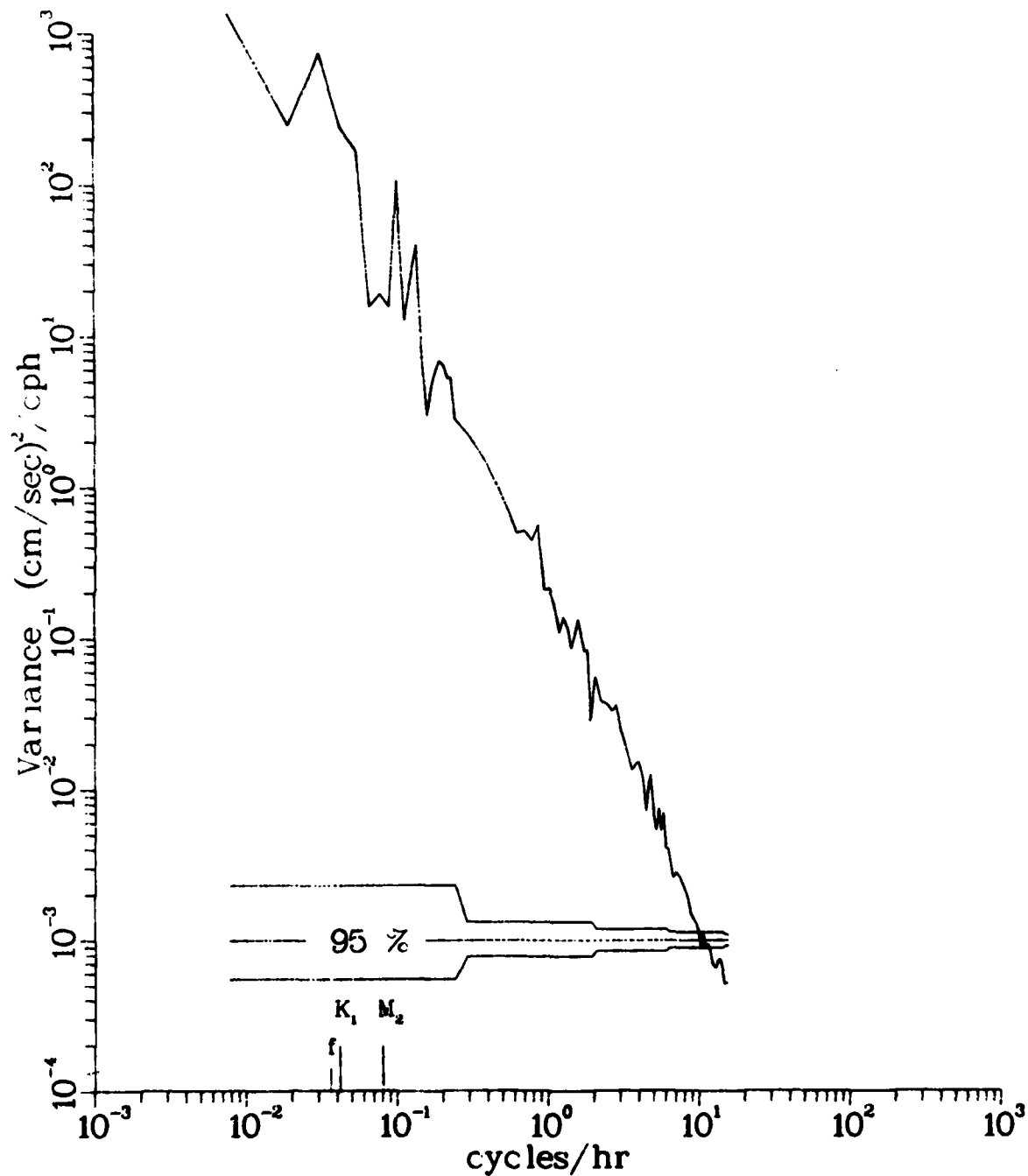
AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL 8--ETC P/8 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC/
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
UNCLASSIFIED NORDA-TH-88

ML



MICROCOPY RESOLUTION TEST CHART
 NATIONAL BUREAU OF STANDARDS-1963-A

CURRENT SPECTRUM

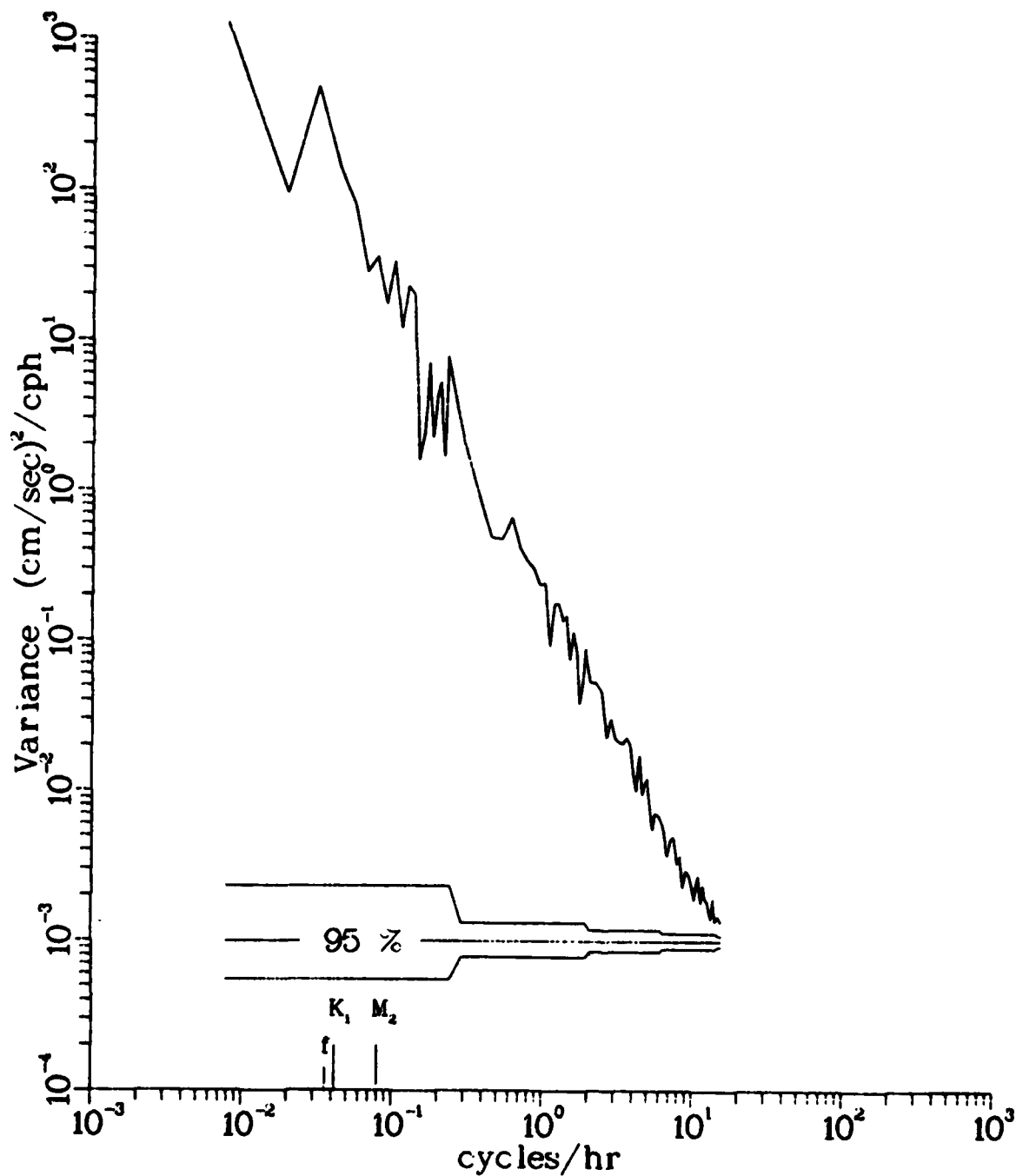


Variable U
File VACMF
Meter 000412
Lat 25.806
Long -89.7442

Array ATOM79
Depth 350
Start 19 DEC 1900
End 29 DEC 1900

Figure 80.

CURRENT SPECTRUM



Variable : V
File : VACMF
Meter : 000412
Lat. : 25 806
Long : -89 742

Array : ATOM79
Depth : 350
Start : 19 DEC 1900
End : 29 DEC 1900

Figure 81.

ROTARY SPECTRUM

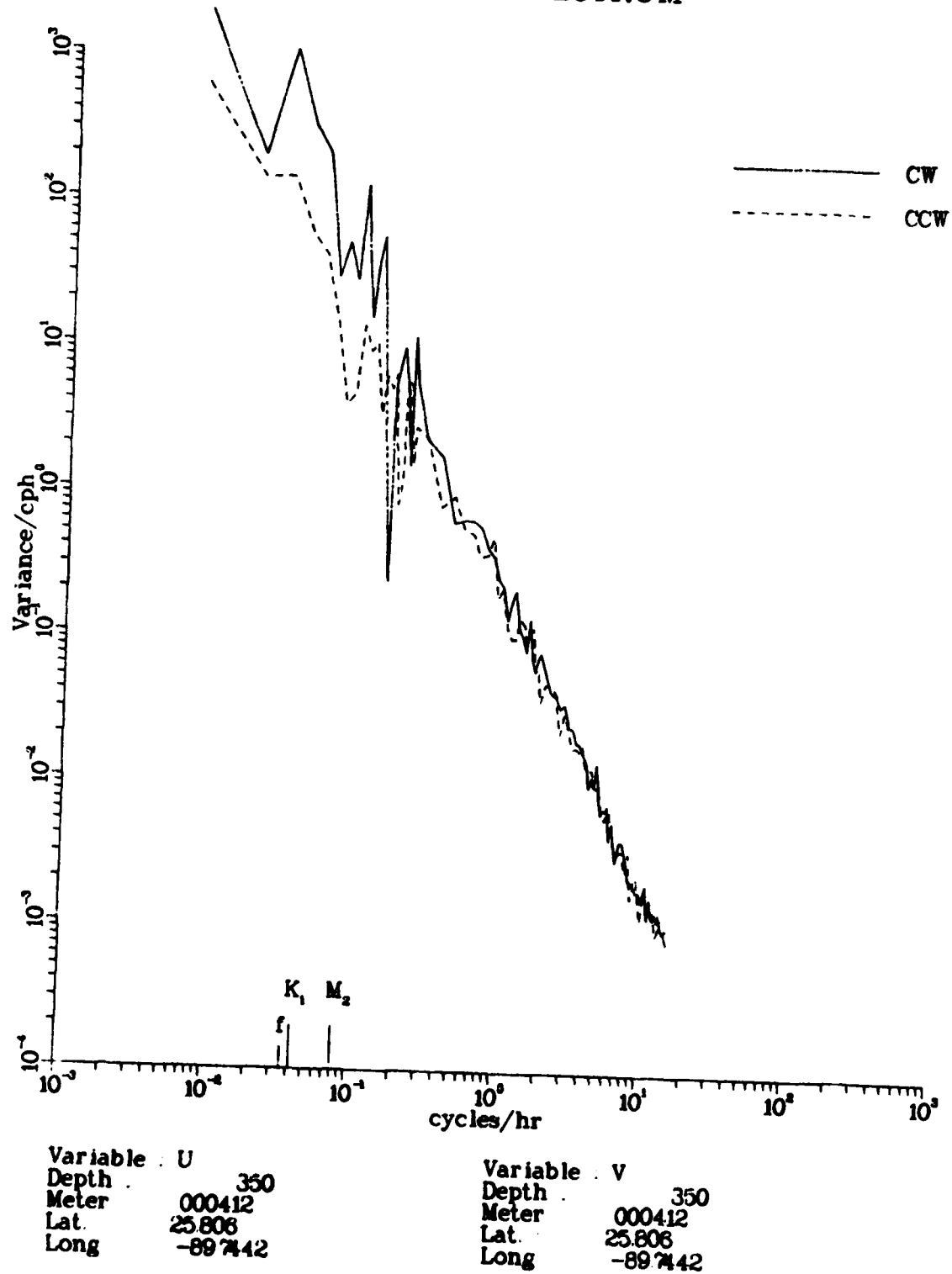
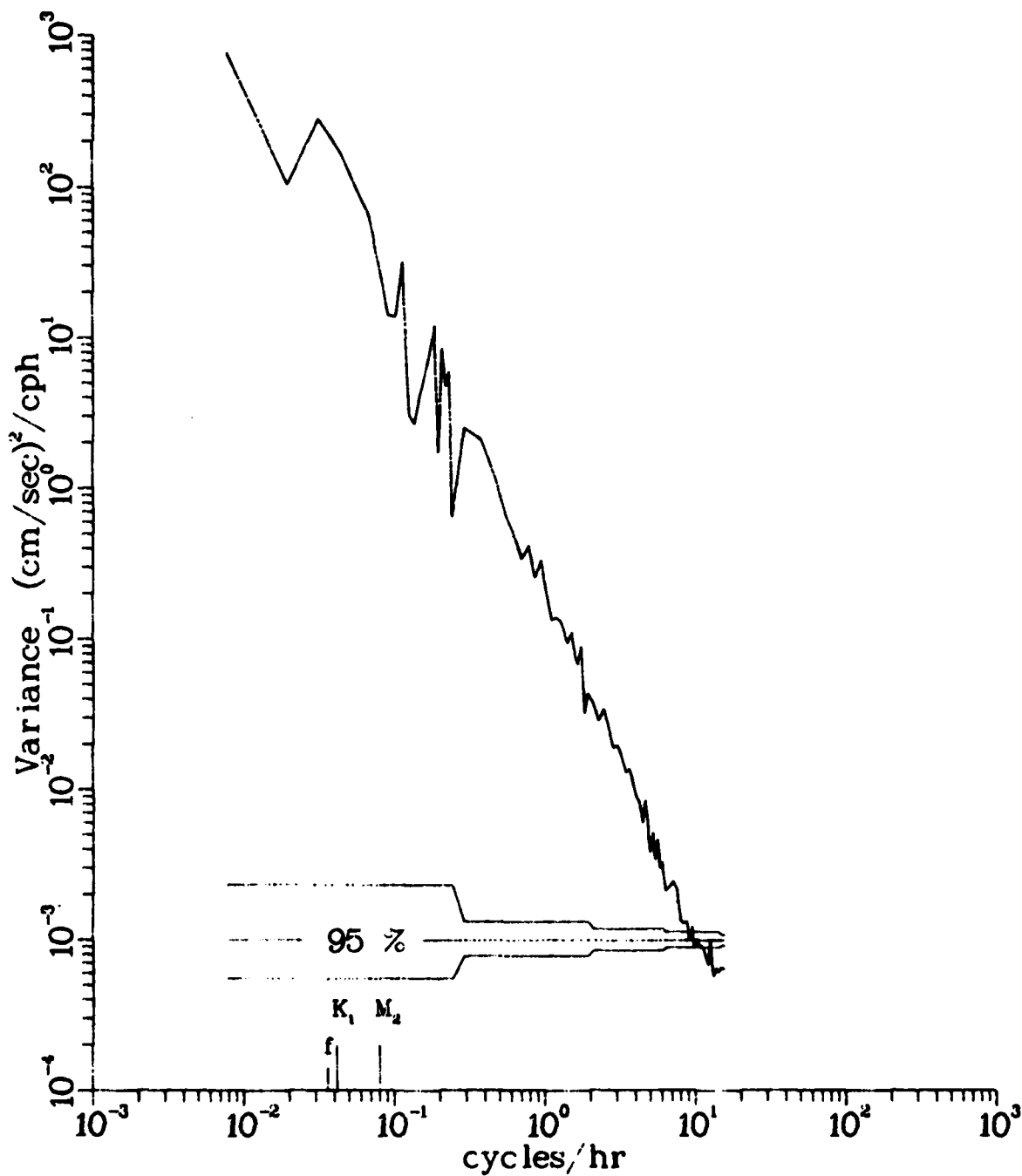


Figure 82.

CURRENT SPECTRUM

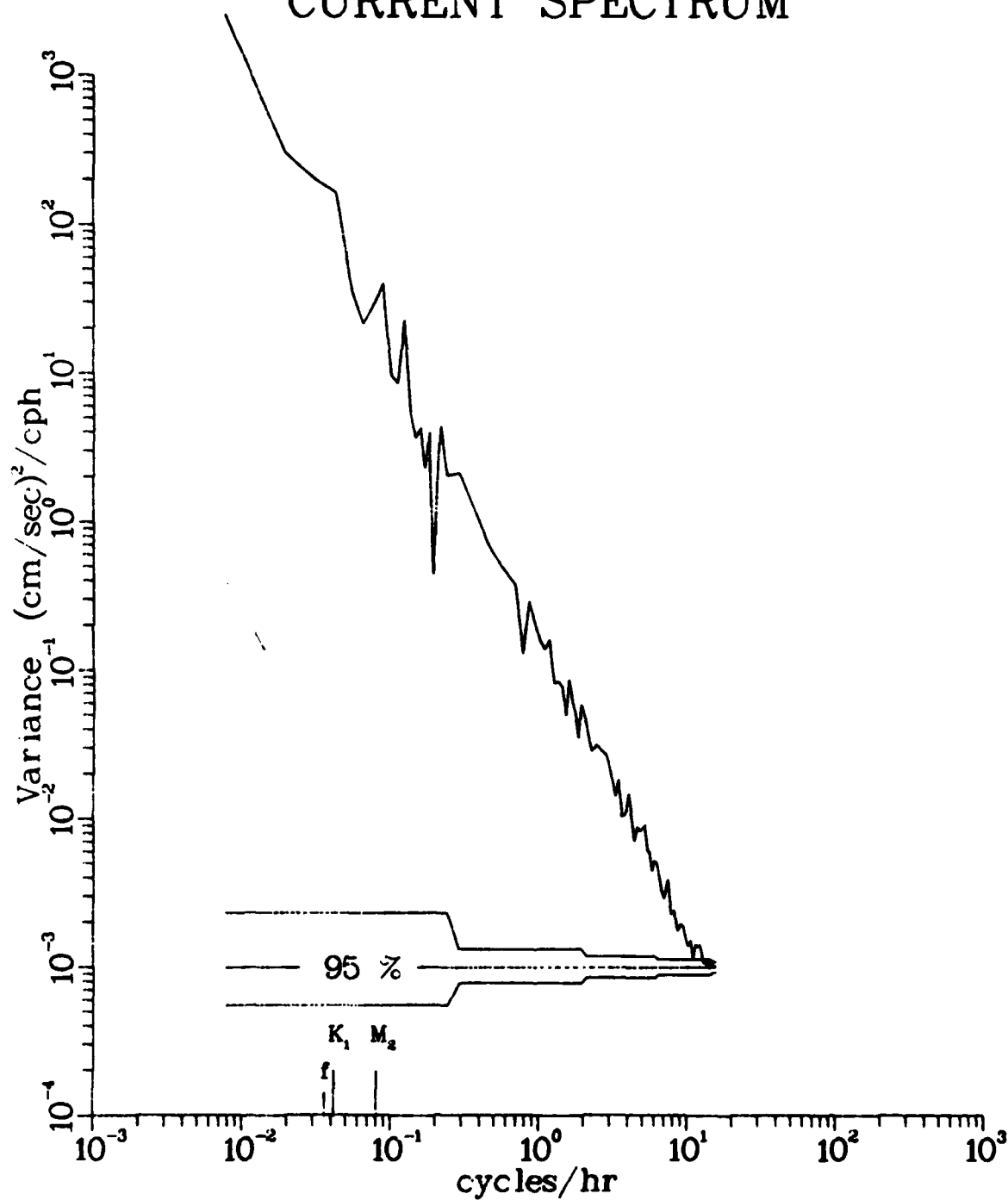


Variable . U
File . VACMF
Meter . 000289
Lat . 25.806
Long . -89 74.42

Array . ATOM79
Depth . 500
Start . 19 DEC 1900
End . 29 DEC 1900

Figure 83.

CURRENT SPECTRUM

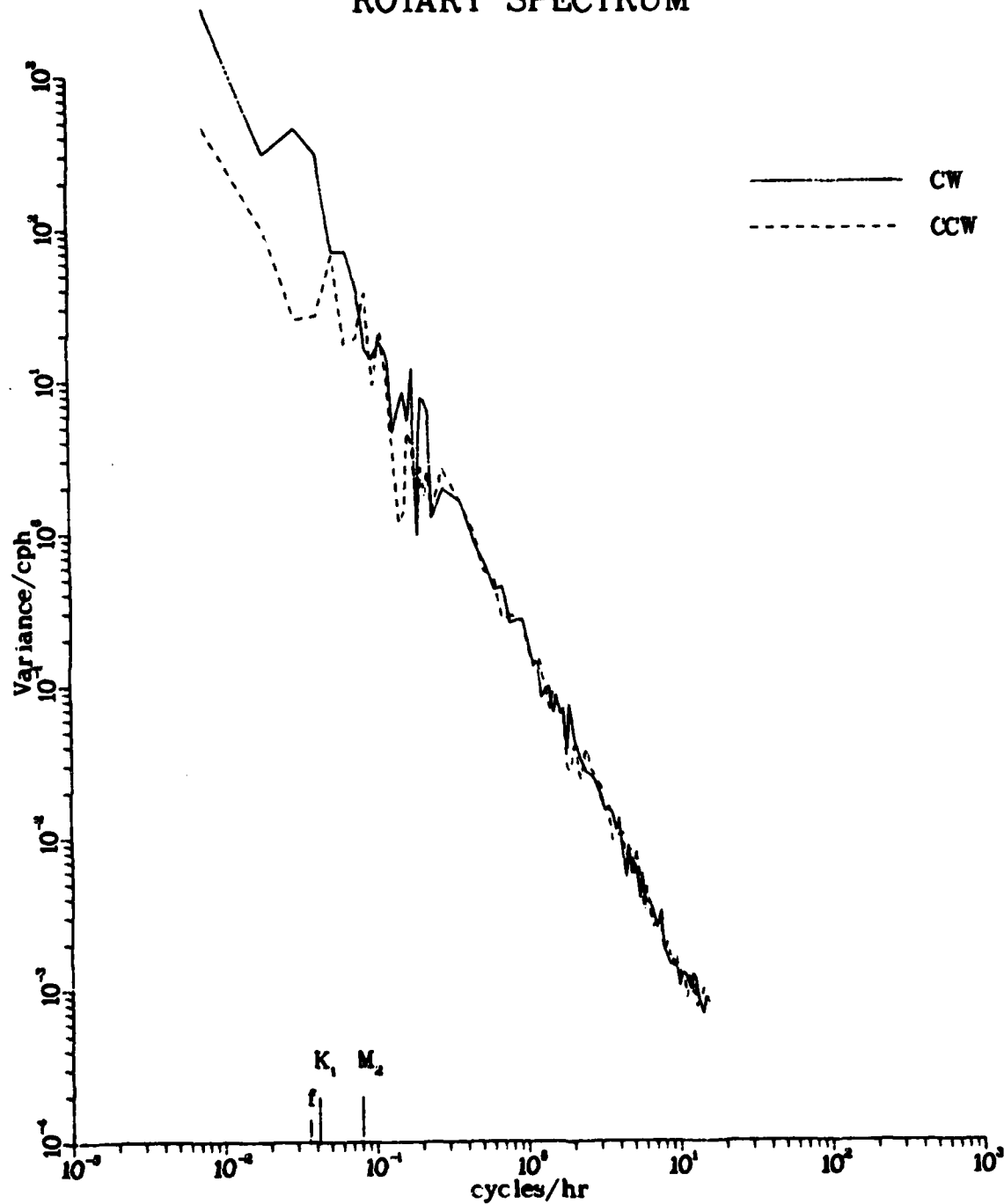


Variable V
File VACMF
Meter 000289
Lat. 25.808
Long -89.7442

Array ATOM79
Depth 500
Start 19 DEC 1900
End 29 DEC 1900

Figure 84.

ROTARY SPECTRUM



Variable : U
 Depth : 500
 Meter : 000289
 Lat. : 25.808
 Long : -89.7442

Variable : V
 Depth : 500
 Meter : 000289
 Lat. : 25.808
 Long : -89.7442

Figure 85.

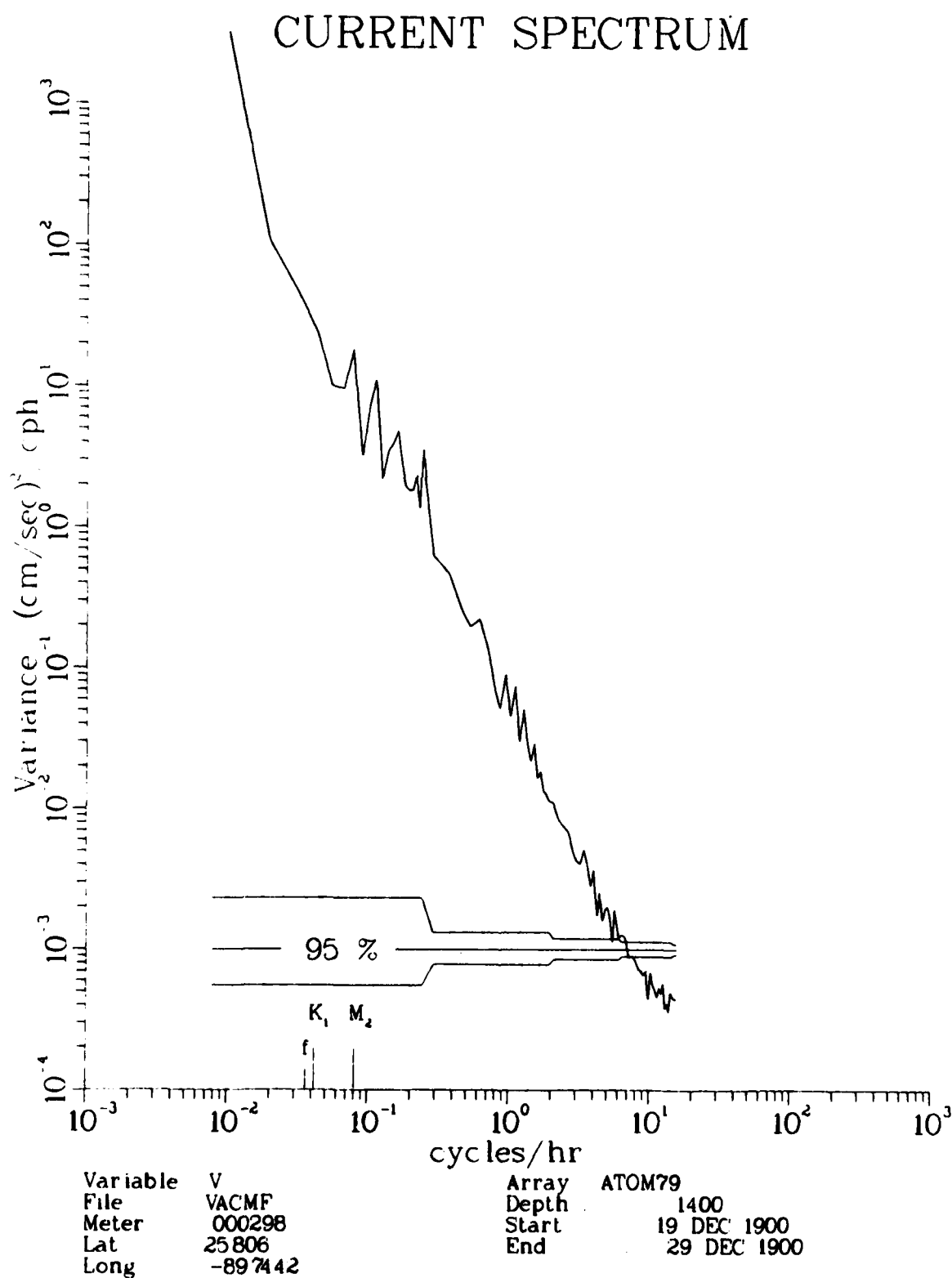


Figure 86.

CURRENT SPECTRUM

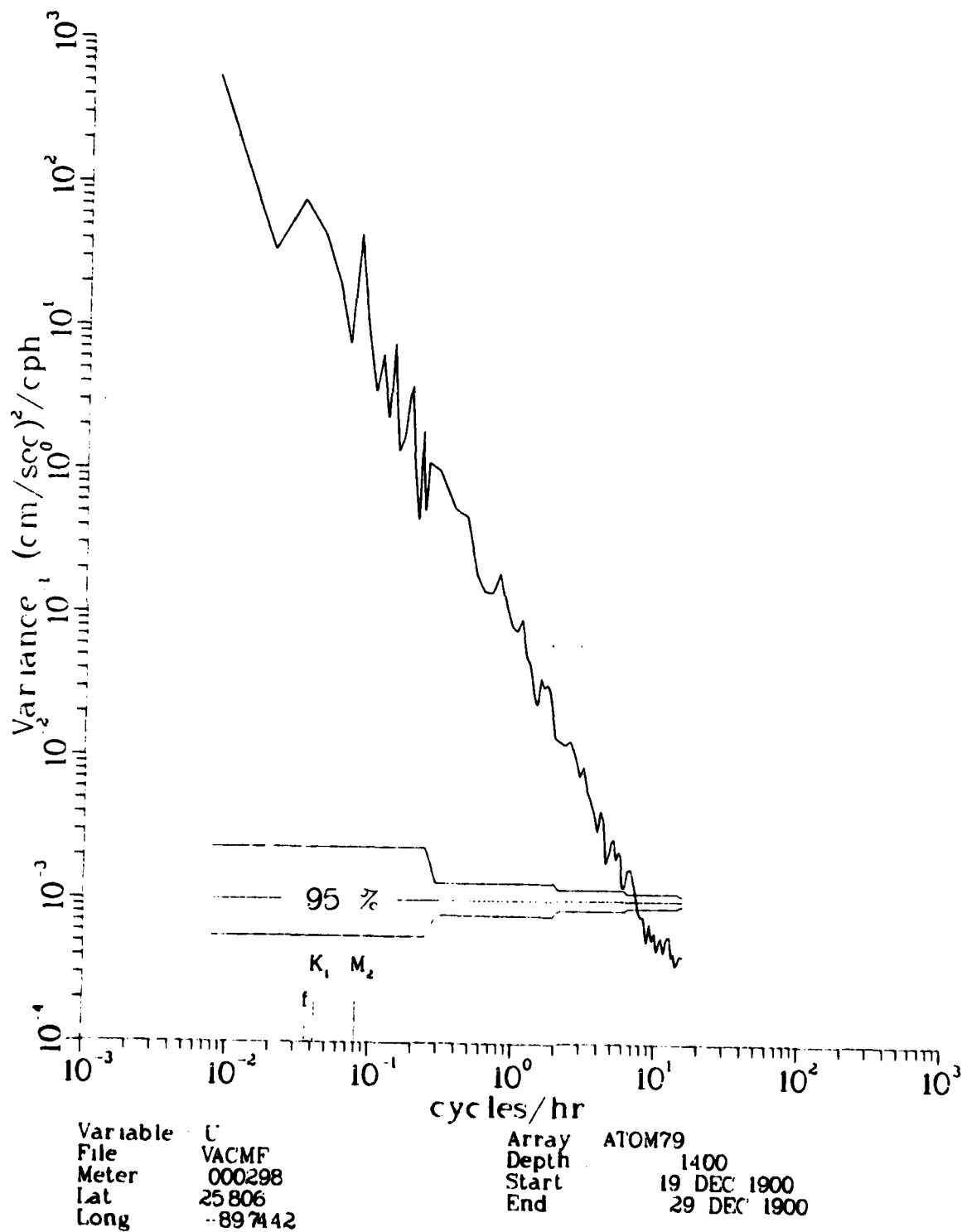
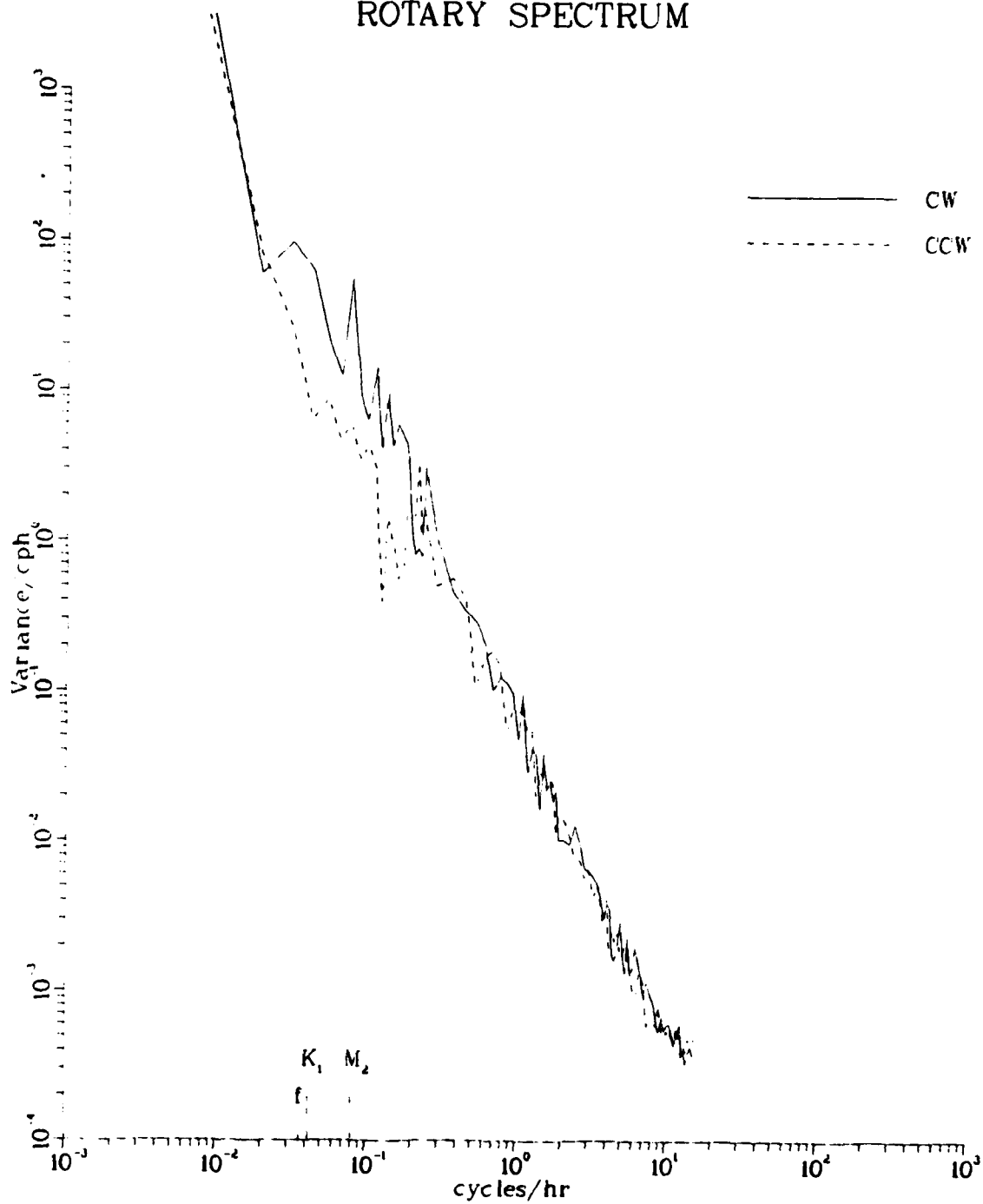


Figure 87.

ROTARY SPECTRUM



Variable U
 Depth 1400
 Meter 000298
 Lat 25 806
 Long -89 7442

Variable V
 Depth 1400
 Meter 000298
 Lat 25 806
 Long -89 7442

Figure 88.

CURRENT SPECTRUM

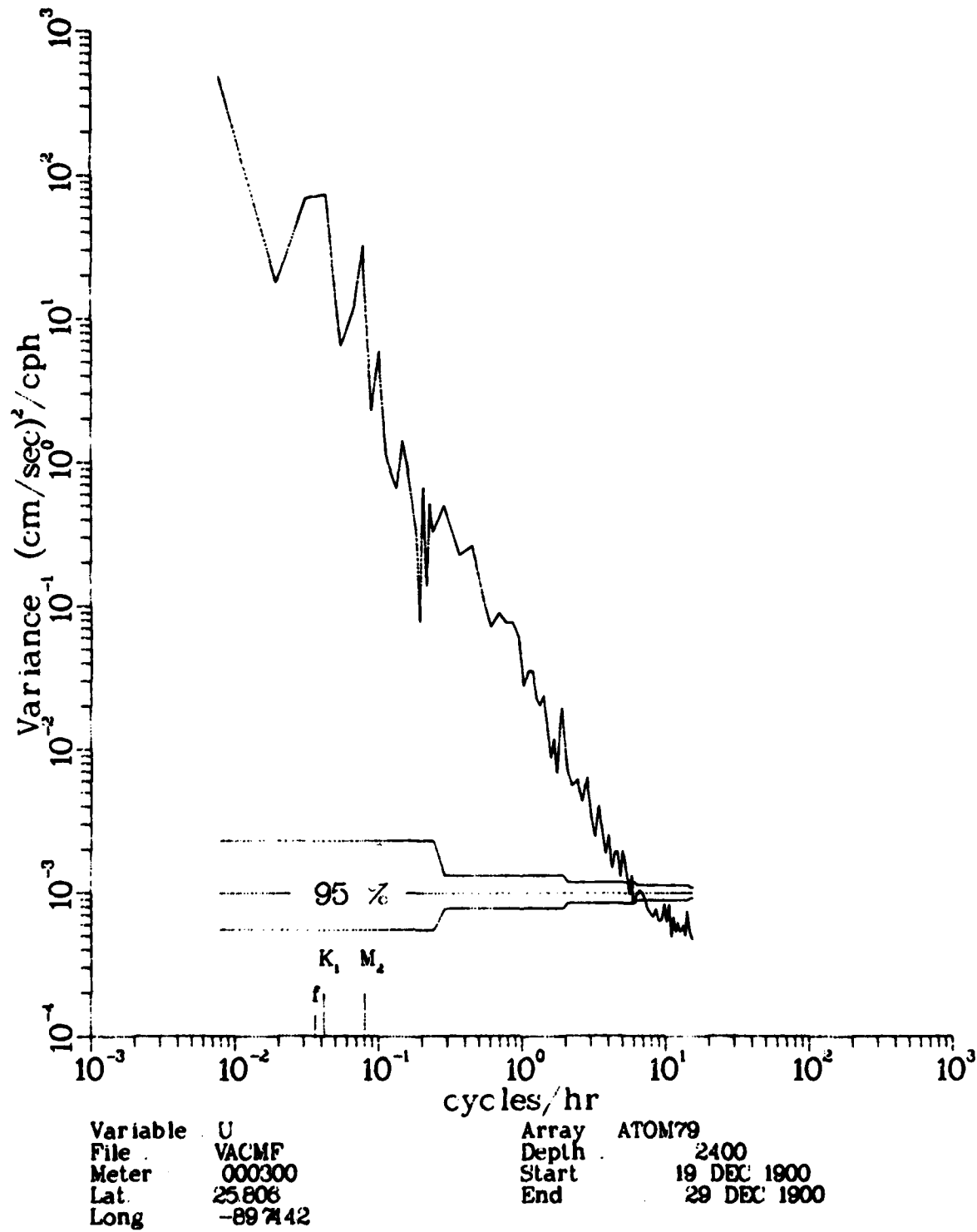
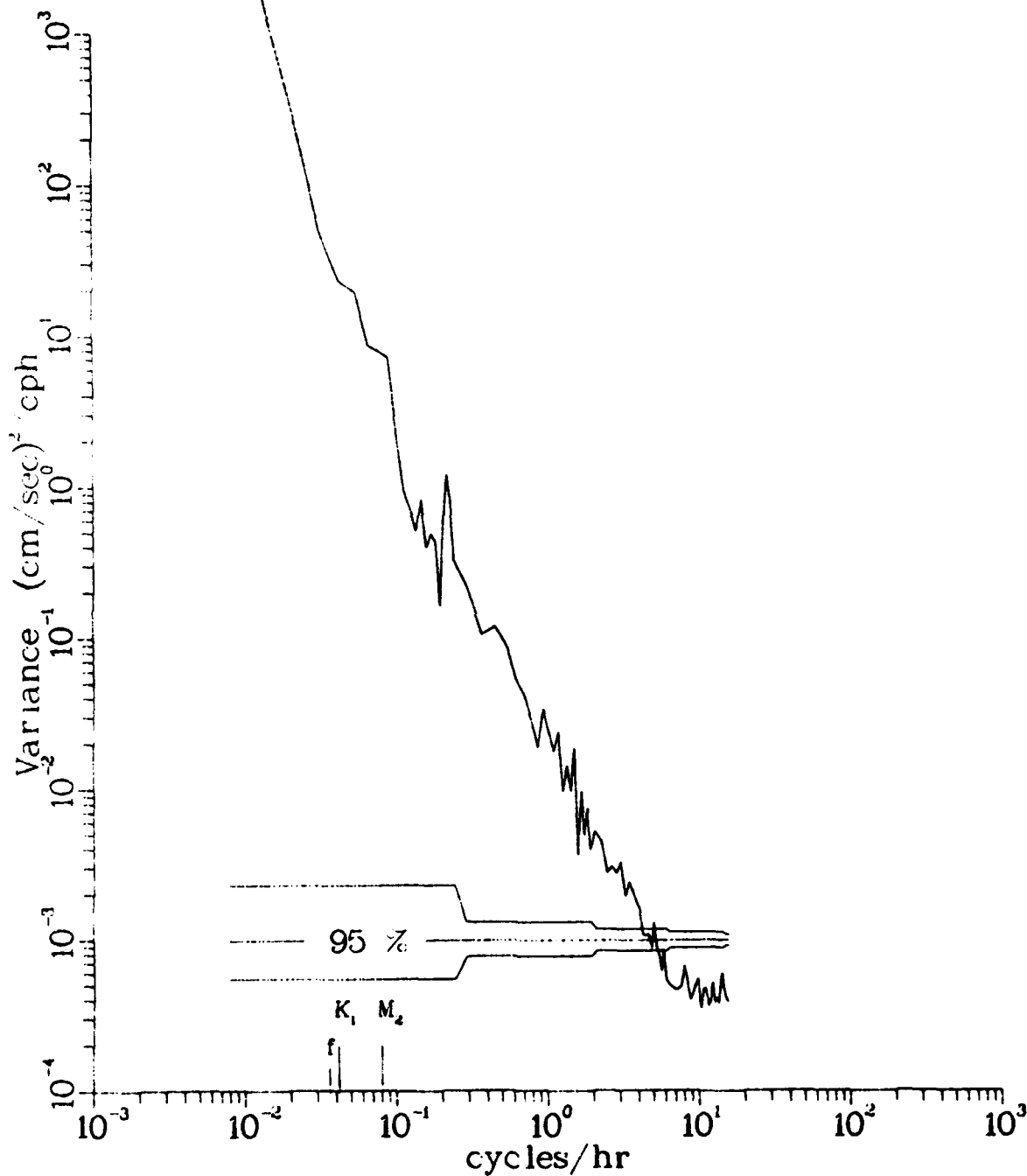


Figure 89.

CURRENT SPECTRUM

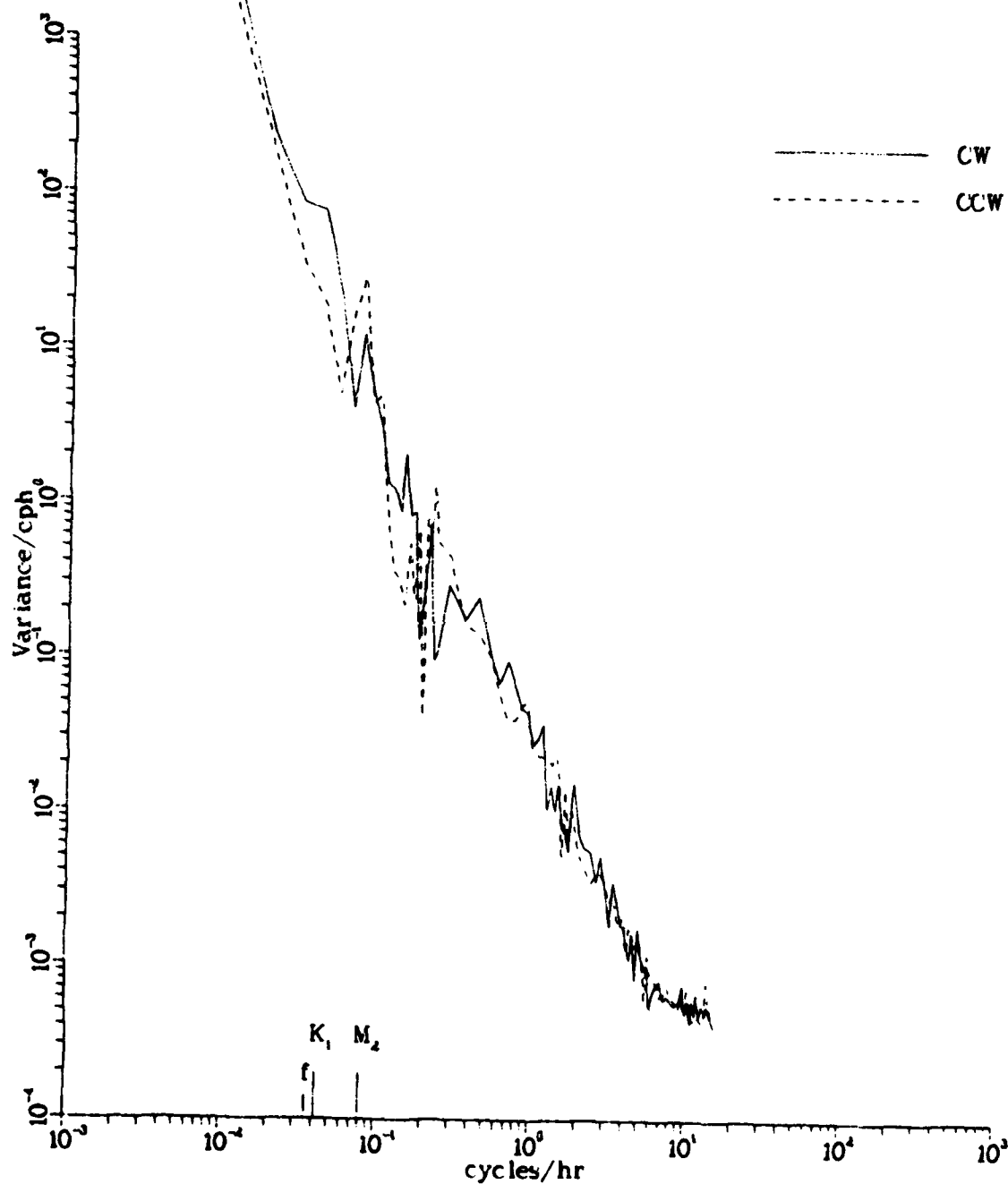


Variable V
File VACMF
Meter 000300
Lat 25.806
Long -89.7442

Array ATOM79
Depth 2400
Start 19 DEC 1900
End 29 DEC 1900

Figure 90.

ROTARY SPECTRUM

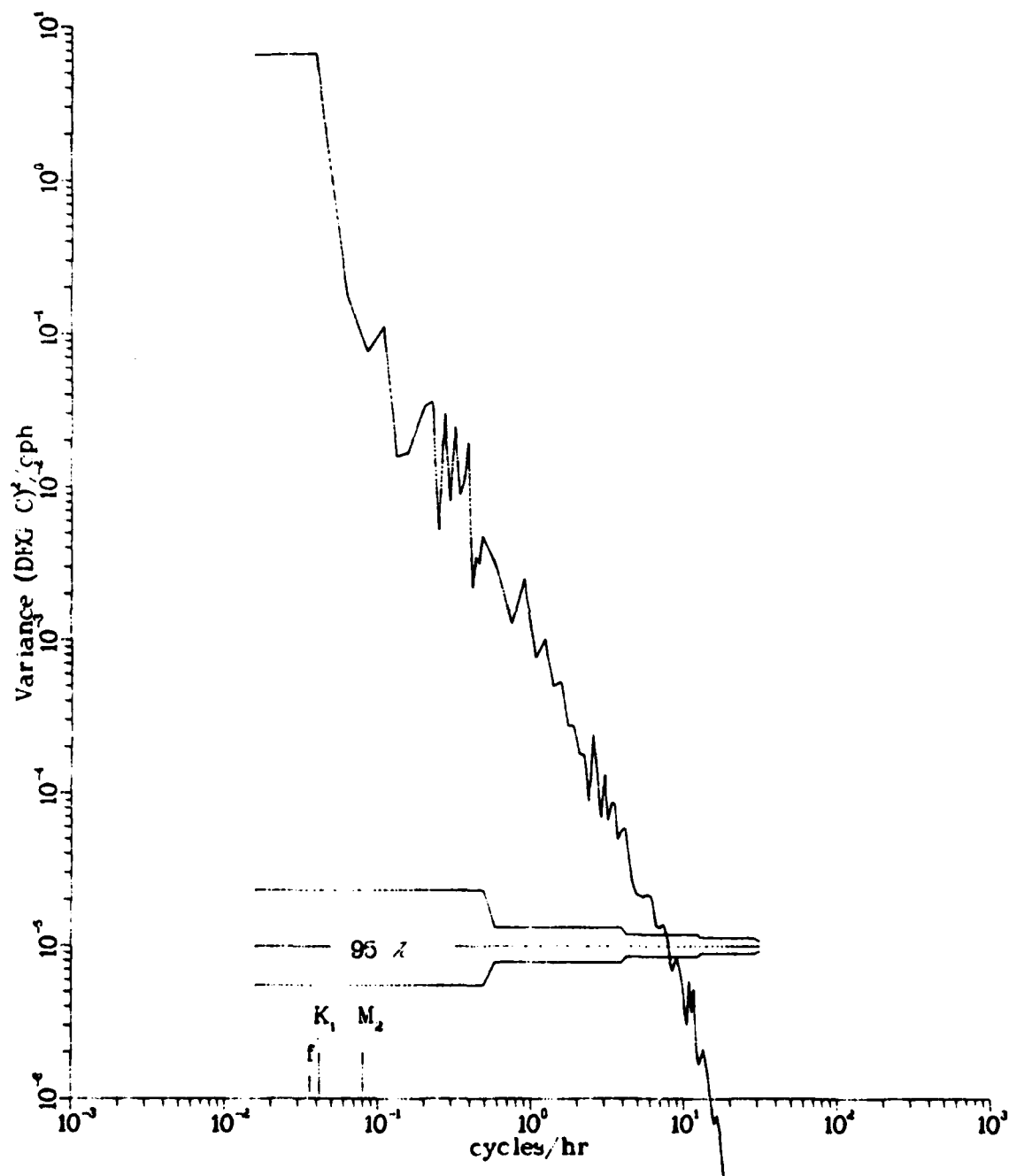


Variable U
 Depth 2400
 Meter 000300
 Lat 25 806
 Long -89 7442

Variable V
 Depth 2400
 Meter 000300
 Lat 25 806
 Long -89 7442

Figure 91.

TEMPERATURE SPECTRUM



Variable T
File VACMF
Meter 000407
Lat 25 806
Long -89 7442

Array Depth 100
Start 19 DEC 1900
End 24 DEC 1900

ATOM79

Figure 92.

TEMPERATURE SPECTRUM

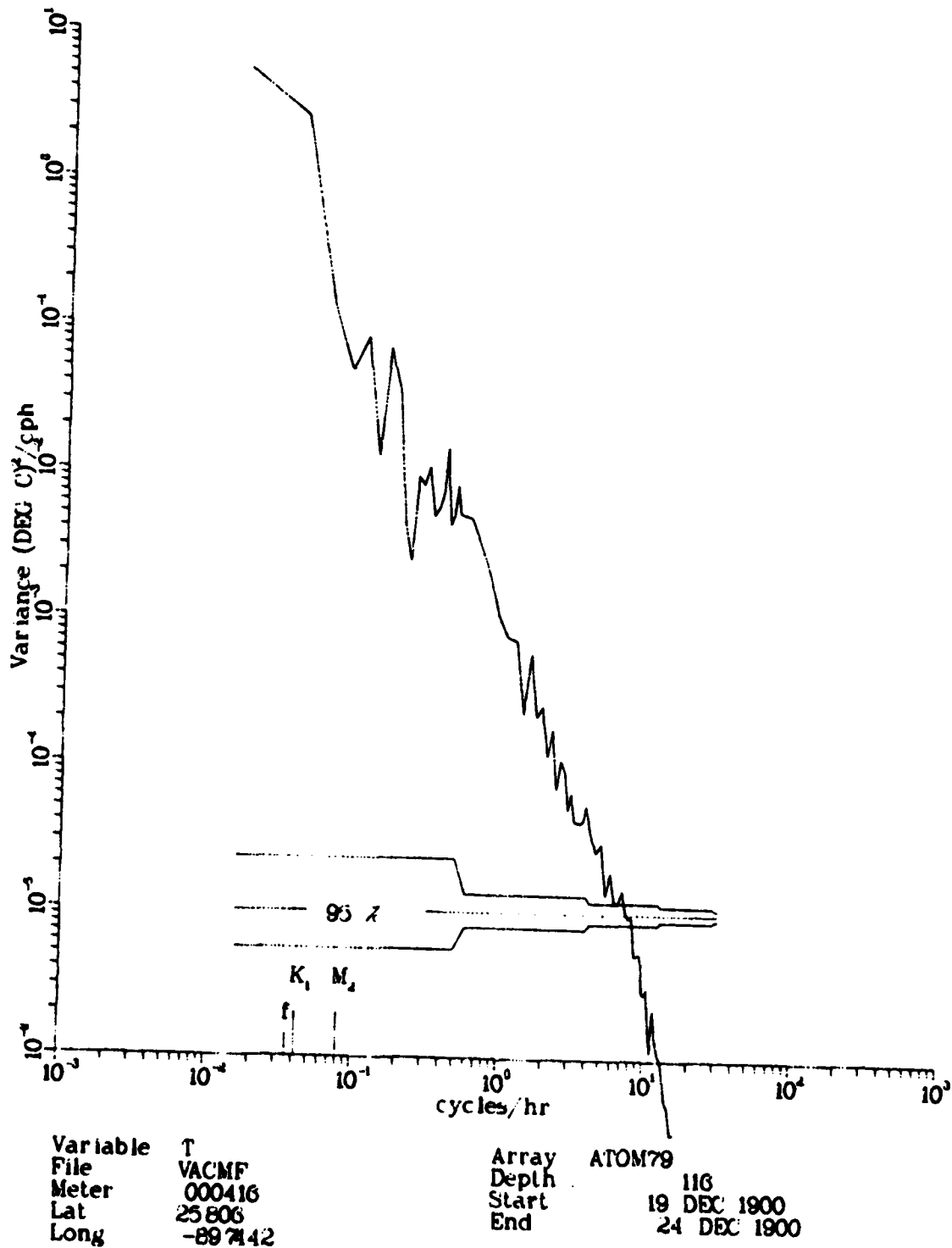
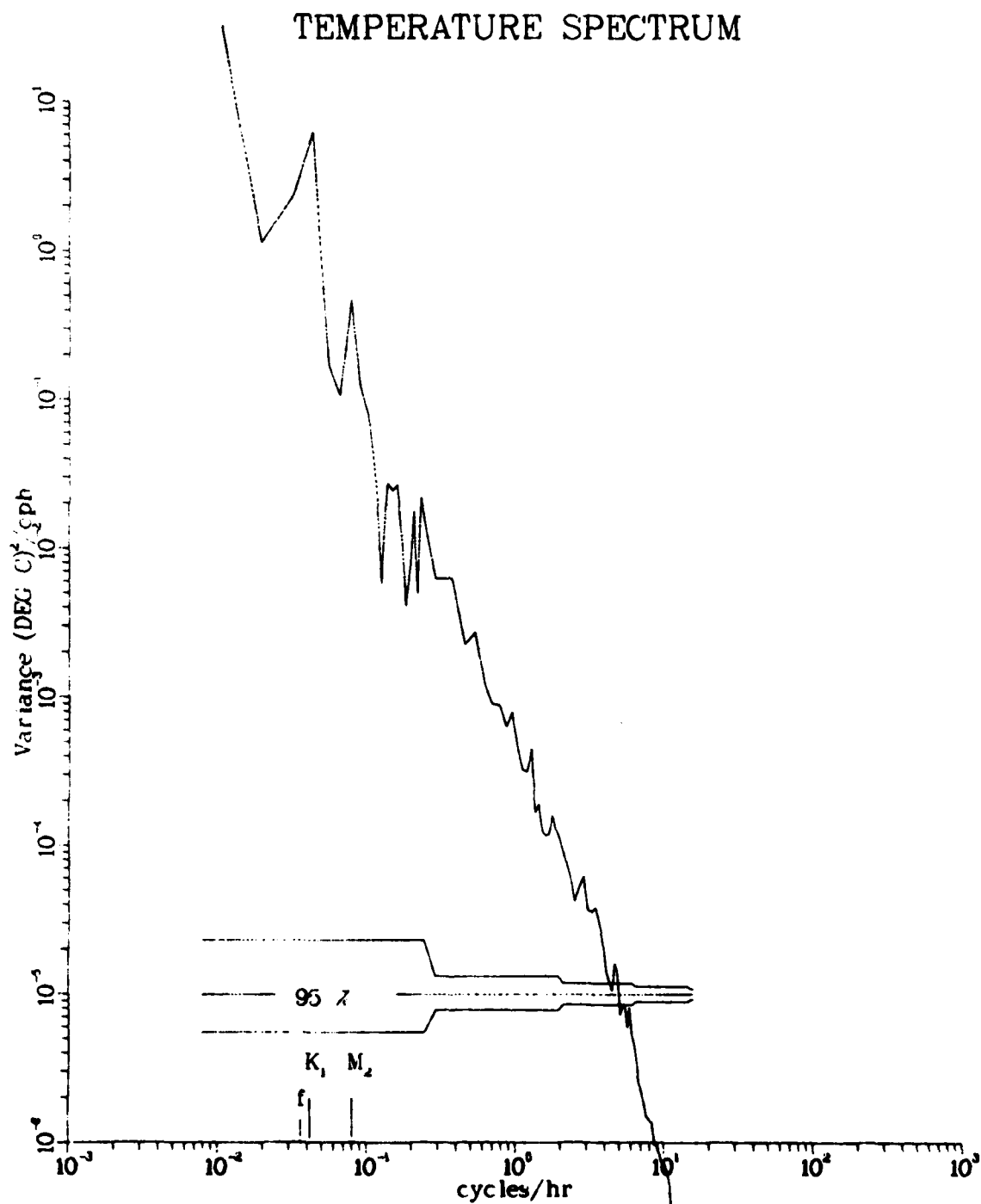


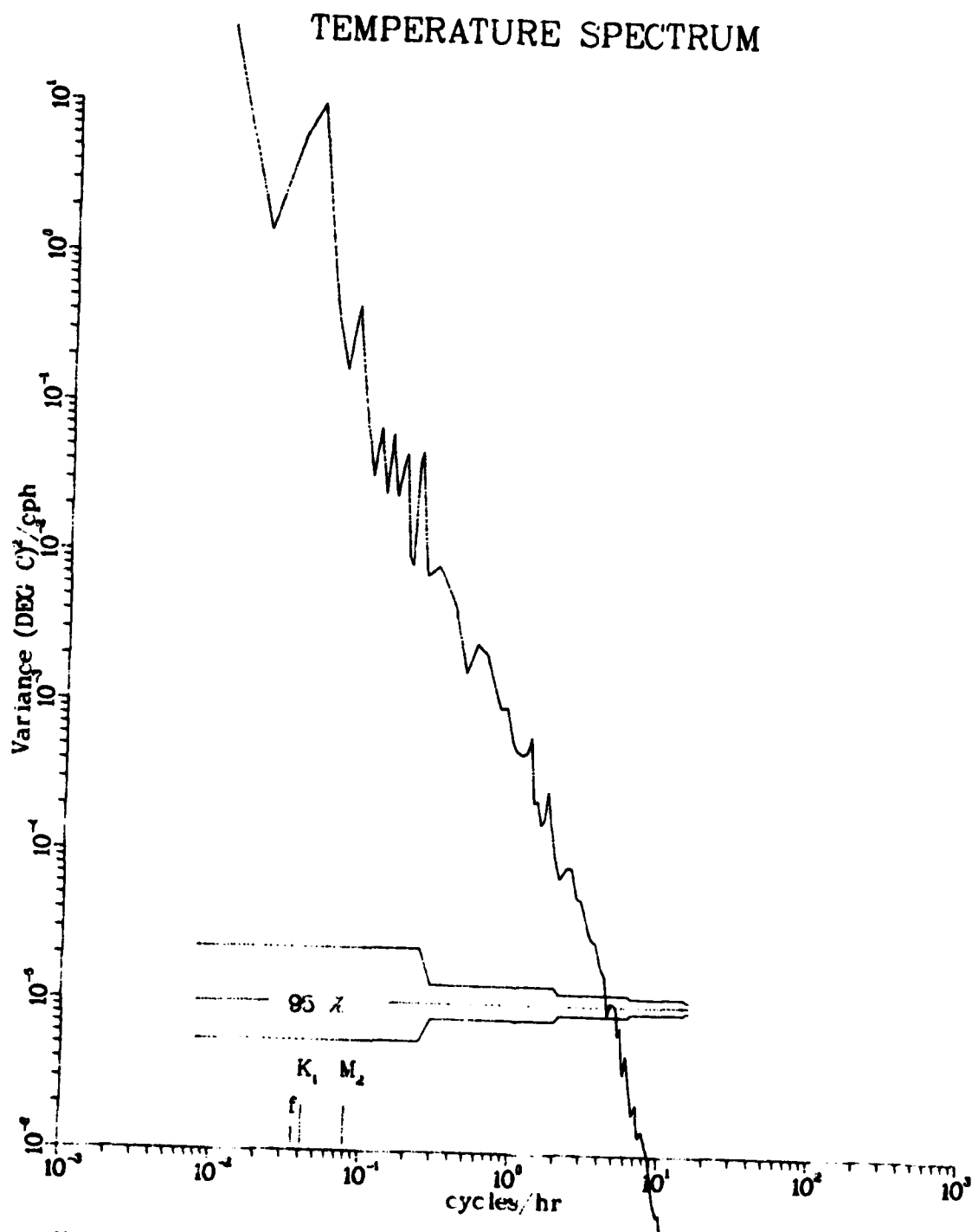
Figure 93.



Variable T
 File VACMF
 Meter 000296
 Lat 25.808
 Long -89.7142

Array ATOM79
 Depth 214
 Start 19 DEC 1900
 End 29 DEC 1900

Figure 94.

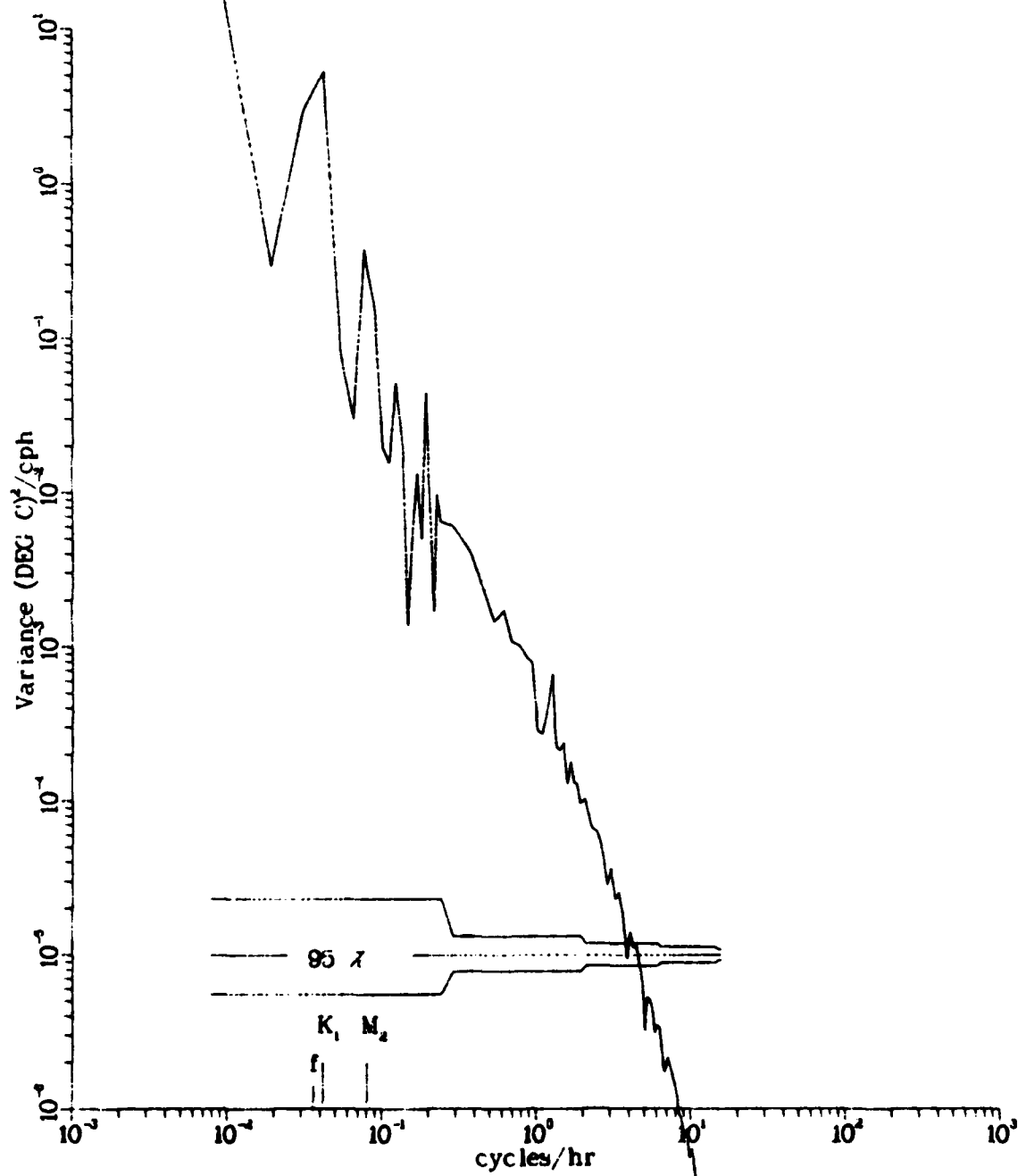


Variable T
 File VACMF
 Meter 000412
 Lat. 25.806
 Long -89.742

Array ATOM79
 Depth 350
 Start 19 DEC 1900
 End 29 DEC 1900

Figure 95.

TEMPERATURE SPECTRUM

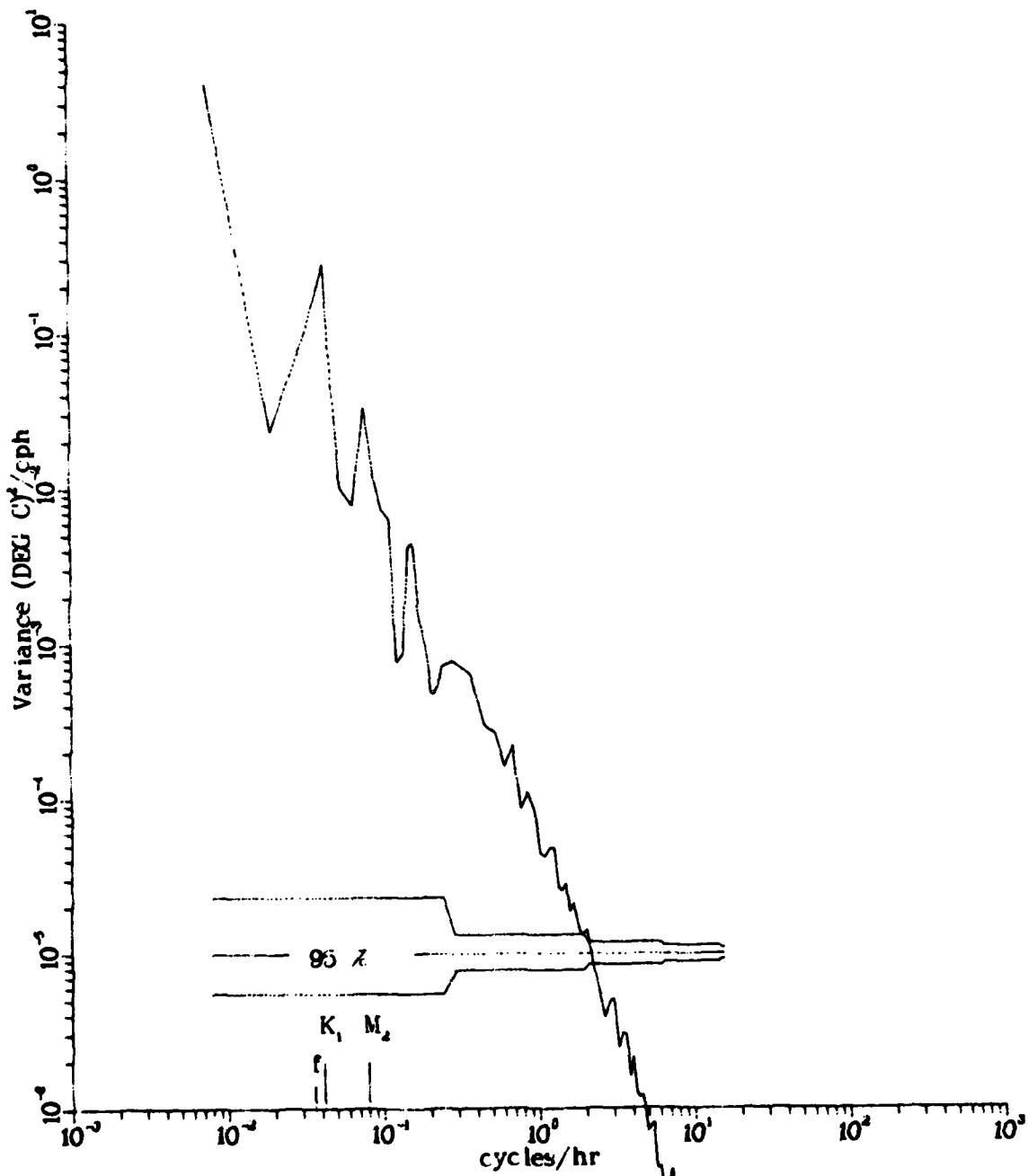


Variable T
File VACMF
Meter 000289
Lat 25.806
Long -89.742

Array ATOM79
Depth 500
Start 19 DEC 1900
End 29 DEC 1900

Figure 96.

TEMPERATURE SPECTRUM

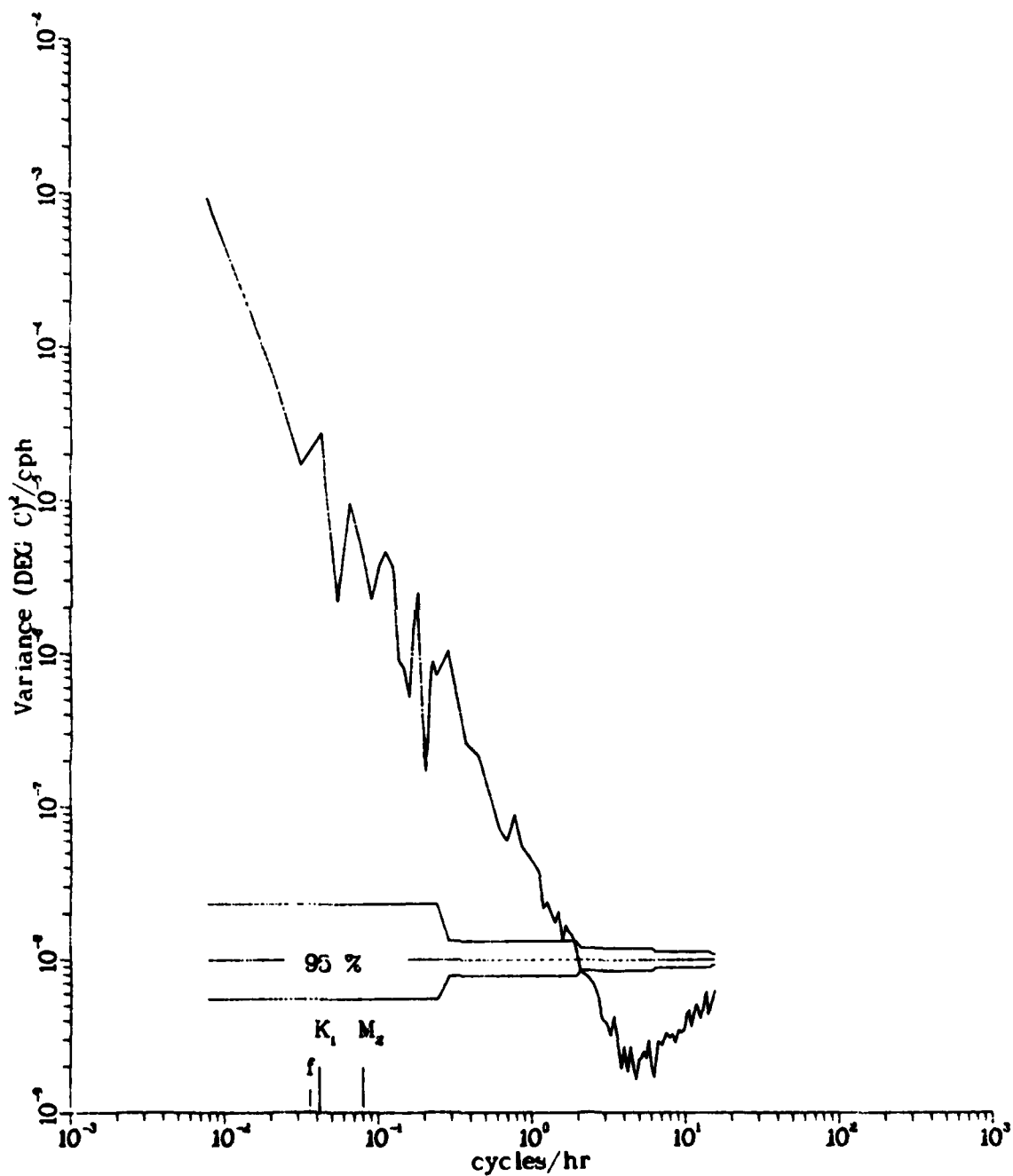


Variable T
File VACMF
Meter 000216
Lat 25 808
Long -89 7442

Array ATOM79
Depth 800
Start 19 DEC 1900
End 29 DEC 1900

Figure 97.

TEMPERATURE SPECTRUM



Variable T
File VACMF
Meter 000300
Lat. 25.806
Long -89.7142

Array ATOM79
Depth 2400
Start 19 DEC 1900
End 29 DEC 1900

Figure 98.

3.2 Acoustic Current Meters

3.2.1 Current Histograms and Statistics (Figures 99-124)

3.2.2 Current Time Series (Figures 125-189)

3.2.3 Temperature Time Series (Figures 190-201)

3.2.4 Current Spectra (Figures 202-240)

3.2.5 Temperature Spectra (Figures 241-252)

[illegible]

Figure 99.

FILE: ACM		ARRAY: ATOM79		LATITUDE: 25.80555	
METER: 790130		START: 20 DEC 1979		LONGITUDE: -89.744165	
DEPTH: 000130		END:			
9-10	0	0	0	0	0
10-20	0	0	0	0	0
20-30	0	0	0	0	0
30-40	0	0	0	0	0
40-50	0	0	0	0	0
50-60	0	0	0	0	0
60-70	0	0	0	0	0
70-80	0	0	0	0	0
80-90	0	0	0	0	0
90-100	0	0	0	0	0
100-110	0	0	0	0	0
110-120	0	0	0	0	0
120-130	0	0	0	0	0
130-140	0	0	0	0	0
140-150	0	0	0	0	0
150-160	0	0	0	0	0
160-170	0	0	0	0	0
170-180	0	0	0	0	0
180-190	0	0	0	0	0
190-200	0	0	0	0	0
200-210	0	0	0	0	0
210-220	0	0	0	0	0
220-230	0	0	0	0	0
230-240	0	0	0	0	0
240-250	0	0	0	0	0
250-260	36	145	266	561	232
260-270	60	156	288	169	432
270-280	48	73	154	460	493
280-290	46	434	665	812	854
290-300	3	324	755	1230	1325
300-310	334	734	1632	1110	1984
310-320	60	124	57	477	2321
320-330	35				1732
330-340	296	1298	1666	251	
340-350	59	454	71	5	
350-360	0	0	0	0	0
SPEED	0	5	10	15	20
SUM	0	0	0	0	0
PER CT,	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0
TOTAL NUMBER OF OBS.	3600				
AVERAGE SCALAR SPEED	45.79	CM/SEC			
STANDARD DEVIATION	8.24	CM/SEC			
VECTOR MEAN SPEED	43.31	CM/SEC			
VECTOR MEAN DIRECTION	300.46	DEGREES TRUE			
MAXIMUM/MINIMUM U	-18.81	CM/SEC			
MAXIMUM/MINIMUM V	53.83	CM/SEC			
MAXIMUM SPEED	63.62	CM/SEC			
DIRECTION OF MAX SPO	327.07	DEGREES TRUE			
PERCENTAGE ZERO SPEEDS	0.0				
PER CT,	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0
TOTAL NUMBER OF OBS.	3600				
AVERAGE SCALAR SPEED	45.79	CM/SEC			
STANDARD DEVIATION	8.24	CM/SEC			
VECTOR MEAN SPEED	43.31	CM/SEC			
VECTOR MEAN DIRECTION	300.46	DEGREES TRUE			
MAXIMUM/MINIMUM U	-18.81	CM/SEC			
MAXIMUM/MINIMUM V	53.83	CM/SEC			
MAXIMUM SPEED	63.62	CM/SEC			
DIRECTION OF MAX SPO	327.07	DEGREES TRUE			
PERCENTAGE ZERO SPEEDS	0.0				
PER CT,	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0
TOTAL NUMBER OF OBS.	3600				
AVERAGE SCALAR SPEED	45.79	CM/SEC			
STANDARD DEVIATION	8.24	CM/SEC			
VECTOR MEAN SPEED	43.31	CM/SEC			
VECTOR MEAN DIRECTION	300.46	DEGREES TRUE			
MAXIMUM/MINIMUM U	-18.81	CM/SEC			
MAXIMUM/MINIMUM V	53.83	CM/SEC			
MAXIMUM SPEED	63.62	CM/SEC			
DIRECTION OF MAX SPO					

Figure 100.

FILE: ACM		ARRAY: ATOM79		LATITUDE: 25.80555							
MYER: 790130		STAR: 20 DEC 1979		LONGITUDE: -89.74416							
DEPTH: 000137		END:									
7-10	1	106	66	130	412	381	197	104	1	1387	2.9
10-20	1	53	81	166	324	754	718	159	108	2363	6.6
20-30	1	76	133	189	244	551	1354	610		3337	9.3
30-40	1	47	464	689	1392	1020	921	614	84	5201	14.4
40-50	1	16	281	887	1561	1168	1436	1008	60	6407	17.8
50-60	1	1	310	658	772	385	1834	2567	1068	7704	21.4
60-70	1	57	163	138	276	1750	2462	1251	248	6393	17.8
70-80	1	2	3	3	4	67	827	1672	394	3071	8.5
80-90	1	1	2	3	3	1	13	75	13	111	.3
90-100	1	2	4	1	1	1	1	1	1	5	.0
100-110	1	2	4	1	1	1	1	1	1	7	.0
110-120	1	2	4	1	1	1	1	1	1	7	.0
120-130	1	2	4	1	1	1	1	1	1	7	.0
130-140	1	2	4	1	1	1	1	1	1	7	.0
140-150	1	2	4	1	1	1	1	1	1	7	.0
150-160	1	2	4	1	1	1	1	1	1	7	.0
160-170	1	2	4	1	1	1	1	1	1	7	.0
170-180	1	2	4	1	1	1	1	1	1	7	.0
180-190	1	2	4	1	1	1	1	1	1	7	.0
190-200	1	2	4	1	1	1	1	1	1	7	.0
200-210	1	2	4	1	1	1	1	1	1	7	.0
210-220	1	2	4	1	1	1	1	1	1	7	.0
220-230	1	2	4	1	1	1	1	1	1	7	.0
230-240	1	2	4	1	1	1	1	1	1	7	.0
240-250	1	2	4	1	1	1	1	1	1	7	.0
250-260	1	2	4	1	1	1	1	1	1	7	.0
260-270	1	2	4	1	1	1	1	1	1	7	.0
270-280	1	2	4	1	1	1	1	1	1	7	.0
280-290	1	2	4	1	1	1	1	1	1	7	.0
290-300	1	2	4	1	1	1	1	1	1	7	.0
300-310	1	2	4	1	1	1	1	1	1	7	.0
310-320	1	2	4	1	1	1	1	1	1	7	.0
320-330	1	2	4	1	1	1	1	1	1	7	.0
330-340	1	2	4	1	1	1	1	1	1	7	.0
340-350	1	2	4	1	1	1	1	1	1	7	.0
350-360	1	2	4	1	1	1	1	1	1	7	.0
SPEED 0 1 3 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100											
SUM 0 1 3 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100											
PER CT. 0 1 3 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100											
NUMBER OF ZERO SPEEDS 0 1 3 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100											
TOTAL NUMBER OF OBS. 36700											
AVERAGE SCALAR SPEED 46.44 CM/SEC											
STANDARD DEVIATION 8.67 CM/SEC											
VECTOR MEAN SPEED 43.99 CM/SEC											
VECTOR MEAN DIRECTION 298.36 DEGREES TRUE											
MAXIMUM/MINIMUM U 95.12 CM/SEC											
MAXIMUM/MINIMUM V 73.51 CM/SEC											
MAXIMUM SPEED 99.97 CM/SEC											
DIRECTION OF MAX SPD 85.19 DEGREES TRUE											

FILE: ACM		ARRAY: ATOM79		LATITUDE:		LONGITUDE:	
METER: 790100		START: 20 DEC 1979		25.805555		-89.744165	
DEPTH: 00014		END:					
0-10	1	63	59	83	570	393	199
10-20	89	354	164	299	767	959	99
20-30	19	289	254	369	672	790	442
30-40	76	154	763	1254	1176	856	349
40-50	53	352	1016	1178	898	1175	956
50-60	70	397	800	783	639	2725	1839
60-70	14	34	33	63	123	1891	2554
70-80	31				178	1359	1494
80-90					119	133	116
90-100							
100-110							
110-120							
120-130							
130-140							
140-150							
150-160							
160-170							
170-180							
180-190							
190-200							
200-210							
210-220							
220-230							
230-240							
240-250							
250-260	1	63	59	83	570	393	199
260-270	89	354	164	299	767	959	99
270-280	19	289	254	369	672	790	442
280-290	76	154	763	1254	1176	856	349
290-300	53	352	1016	1178	898	1175	956
300-310	70	397	800	783	639	2725	1839
310-320	14	34	33	63	123	1891	2554
320-330	31				178	1359	1494
330-340					119	133	116
340-350							
350-360							
SPEED	0	5	10	15	20	25	30
SUM	0	0	0	0	0	0	0
PER CT	0	0	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0	0	0
TOTAL NUMBER OF OBS.	35158						
AVERAGE SCALAR SPEED	45.60	CM/SEC					
STANDARD DEVIATION	8.57	CM/SEC					
VECTOR MEAN SPEED	43.05	CM/SEC					
VECTOR MEAN DIRECTION	298.51	DEGREES TRUE					
PERCENTAGE ZERO SPEEDS	0						
MAXIMUM/MINIMUM U	-14.33	CM/SEC					
MAXIMUM/MINIMUM V	56.15	CM/SEC					
MAXIMUM SPEED	62.61	CM/SEC					
DIRECTION OF MAX SPD	331.12	DEGREES TRUE					
PERCENTAGE ZERO SPEEDS	0						
MAXIMUM/MINIMUM U	-14.33	CM/SEC					
MAXIMUM/MINIMUM V	56.15	CM/SEC					
MAXIMUM SPEED	62.61	CM/SEC					
DIRECTION OF MAX SPD	331.12	DEGREES TRUE					
PERCENTAGE ZERO SPEEDS	0						
MAXIMUM/MINIMUM U	-14.33	CM/SEC					
MAXIMUM/MINIMUM V	56.15	CM/SEC					
MAXIMUM SPEED	62.61	CM/SEC					
DIRECTION OF MAX SPD	331.12	DEGREES TRUE					

FILE: ACM		ARRAY: ATOM70		LATITUDE: 25.81555	
MIDR: 790120		START: 20 DEC 1279		LONGITUDE: -89.744165	
DEPTH: 000151		END:			
7-10					0
11-20					0
21-30					0
31-40					0
41-50					0
51-60					0
61-70					0
71-80					0
81-90					0
91-100					0
100-110					0
110-120					0
120-130					0
130-140					0
140-150					0
150-160					0
160-170					0
170-180					0
180-190					0
190-200					0
200-210					0
210-220					0
220-230					0
230-240					0
240-250					0
250-260					0
260-270					0
270-280					0
280-290					0
290-300					0
300-310					0
310-320					0
320-330					0
330-340					0
340-350					0
350-360					0
SPEED					
SUM	0	0	0	0	0
PER CI	0	0	0	0	0
NUMBER OF ZERO SPEEDS					
TOTAL NUMBER OF OBS.					
AVERAGE SCALAR SPEED					
STANDARD DEVIATION					
VECTOR MEAN SPEED					
VECTOR MEAN DIRECTION					
PERCENTAGE ZERO SPEEDS					
MAXIMUM/MINIMUM U					
MAXIMUM/MINIMUM V					
MAXIMUM SPEED					
DIRECTION OF MAX SPL					
DEGREES TRUE					

Figure 103.

FILE: ACM		ARMY: ATOM/9		LATITUDE:		LONGITUDE:	
MILK: 290100		SIANT: 20 DEC 1977					
DEPTH: 000100		END:					
U-10	U	10	54	93	67	231	101
10-20	U	20	00	177	467	433	337
20-30	U	30	174	84	343	947	1203
30-40	U	40	100	157	402	757	508
40-50	U	50	139	649	613	1112	750
50-60	U	60	58	672	789	1051	606
60-70	U	70	26	297	250	210	481
70-80	U	80	37	251	53	139	1274
80-90	U	90				184	416
90-100	U	100				4	187
100-110	U	110					
110-120	U	120					
120-130	U	130					
130-140	U	140					
140-150	U	150					
150-160	U	160					
160-170	U	170					
170-180	U	180					
180-190	U	190					
190-200	U	200					
200-210	U	210					
210-220	U	220					
220-230	U	230					
230-240	U	240					
240-250	U	250					
250-260	U	260					
260-270	U	270					
270-280	U	280					
280-290	U	290					
290-300	U	300					
300-310	U	310					
310-320	U	320					
320-330	U	330					
330-340	U	340					
340-350	U	350					
350-360	U	360					
SPEED	0	5	10	15	20	25	30
SUM	U	U	U	U	U	U	U
PER CL	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NUMBER OF ZERO SPEEDS							
TOTAL NUMBER OF OBS							
AVERAGE SCALAR SPEED							
STANDARD DEVIATION							
VECTOR MEAN SPEED							
VECTOR MEAN DIRECTION							
PERCENTAGE ZERO SPEEDS							
MAXIMUM/MINIMUM U							
MAXIMUM/MINIMUM V							
MAXIMUM SPEED							
DIRECTION OF MAX SP							

Figure 104.

[illegible]

[illegible]

FILE: ACM		ARRAY: ATOM70		LATITUDE: 25.905555																		
MEYER: 790100		START: 20 DEC 1979		LONGITUDE: -89.74165																		
DEPTH: 000179		END:																				
0-10					0																	
10-20					0																	
20-30					0																	
30-40					0																	
40-50					0																	
50-60					0																	
60-70					0																	
70-80					0																	
80-90					0																	
90-100					0																	
100-110					0																	
110-120					0																	
120-130					0																	
130-140					0																	
140-150					0																	
150-160					0																	
160-170					0																	
170-180					0																	
180-190					0																	
190-200					0																	
200-210					0																	
210-220					0																	
220-230					0																	
230-240					0																	
240-250			4	39	162																	
250-260			A	220	162																	
260-270			57	343	873																	
270-280			9	300	481																	
280-290			12	1266	992																	
290-300			195	1046	673																	
300-310			162	420	831																	
310-320			18	43	87																	
320-330				105	646																	
330-340				38	148																	
340-350																						
350-360																						
SPEED	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
SUM	0	0	0	0	0	396	3132	3417	6411	100010021	2505	114	0	0	0	0	0	0	0	0	0	
PER CT.	0	0	0	0	0	1.1	8.7	9.5	17.8	27.8	27.8	7.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	
NUMBER OF ZERO SPEEDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL NUMBER OF OBS.	36000																					
AVERAGE SCALAR SPEED	41.33 CM/SEC																					
STANDARD DEVIATION	7.09 CM/SEC																					
VECTOR MEAN SPEED	39.17 CM/SEC																					
VECTOR MEAN DIRECTION	296.94 DEGREES TRUE																					
	DIRECTION OF MAX SPD 317.52 DEGREES TRUE																					

FILE: ACM		ARRAY: ATOM79		LATITUDE: 25.805555																	
WATER: 790100		START: 20 DEC 1979		LONGITUDE: -89.744165																	
DEPTH: 000186		END:																			
0-10																					
10-20																					
20-30																					
30-40																					
40-50																					
50-60																					
60-70																					
70-80																					
80-90																					
90-100																					
100-110																					
110-120																					
120-130																					
130-140																					
140-150																					
150-160																					
160-170																					
170-180																					
180-190																					
190-200																					
200-210																					
210-220																					
220-230																					
230-240																					
240-250																					
250-260																					
260-270																					
270-280																					
280-290																					
290-300																					
300-310																					
310-320																					
320-330																					
330-340																					
340-350																					
350-360																					
SPEED	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
SUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PER CT.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL NUMBER OF OBS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVERAGE SCALAR SPEED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDARD DEVIATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VECTOR MEAN SPEED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VECTOR MEAN DIRECTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERCENTAGE ZERO SPEEDS																					
MAXIMUM/MINIMUM U																					
MAXIMUM/MINIMUM V																					
MAXIMUM SPEED																					
DIRECTION OF MAX SPD																					
DEGREES TRUE																					

Figure 108.

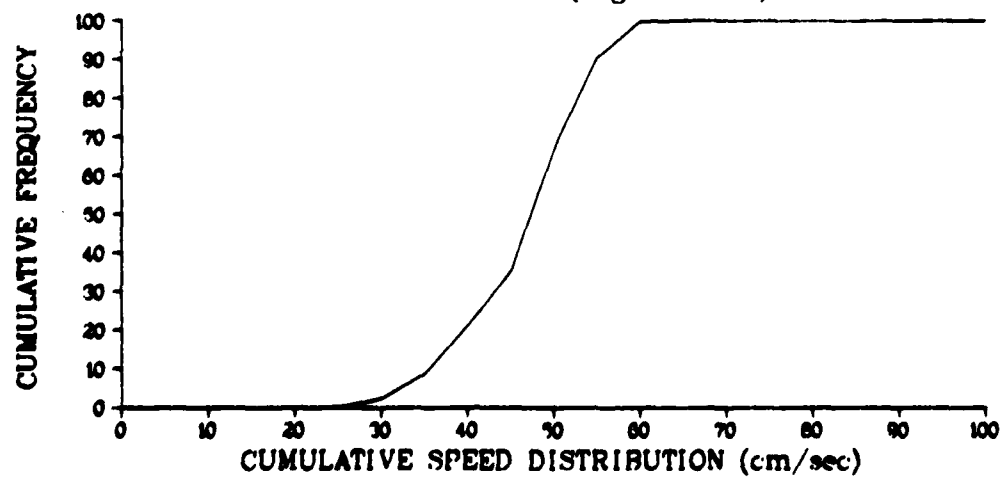
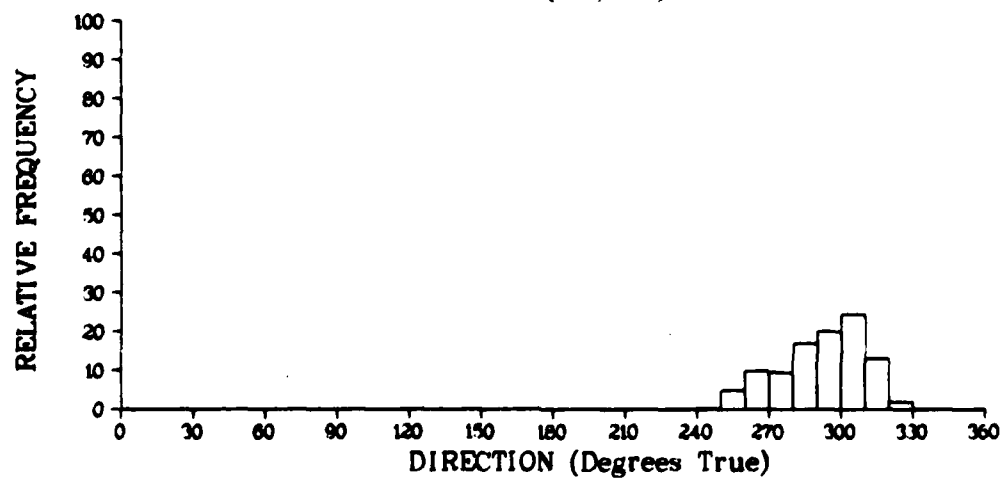
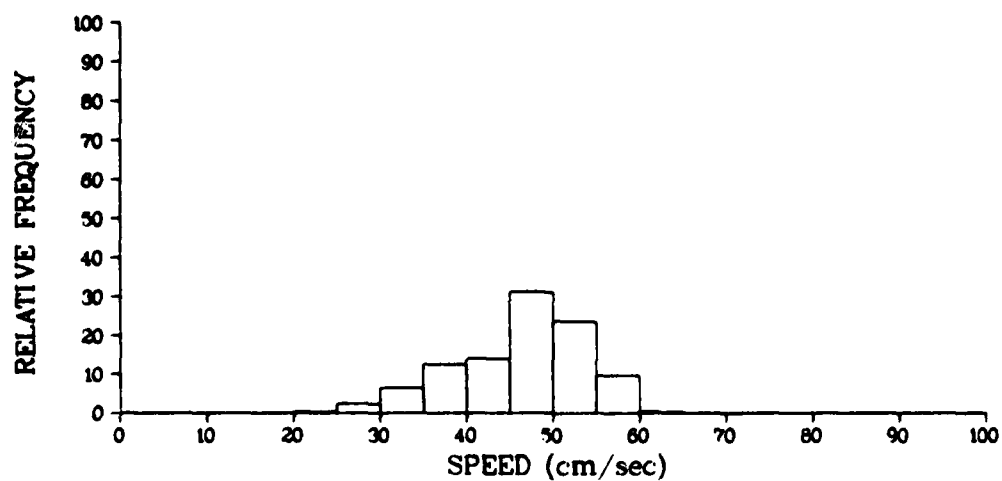
FILE: ACM		ARRIVE: A10M79		LATITUDE: 25-8C5555	
WETER: 790100		START: 27 DEC 1979		LONGITUDE: -89-744165	
DETIME: 000193		END:			
2-10	0	32	97	183	23
10-20	0	235	328	446	442
20-30	0	136	1133	1001	438
30-40	0	240	690	819	935
40-50	0	879	1571	745	1593
50-60	0	75	633	593	1168
60-70	0	44	217	348	976
70-80	0	13	163	1116	2935
80-90	0				1176
90-100	0				336
100-110	0				96
110-120	0				2
120-130	0				9
130-140	0				1
140-150	0				
150-160	0				
160-170	0				
170-180	0				
180-190	0				
190-200	0				
200-210	0				
210-220	0				
220-230	0				
230-240	0				
240-250	0				
250-260	0				
260-270	0				
270-280	0				
280-290	0				
290-300	0				
300-310	0				
310-320	0				
320-330	0				
330-340	0				
340-350	0				
350-360	0				
SPEED	0	5	10	15	20
SUM	0	0	0	0	0
PER CT.	0	0	0	0	0
NUMBER OF ZERO SPEEDS	0	0	0	0	0
TOTAL NUMBER OF OBS.	0	0	0	0	0
AVERAGE SCALAR SPEED	0	0	0	0	0
STANDARD DEVIATION	0	0	0	0	0
VECTOR MEAN SPEED	0	0	0	0	0
VECTOR MEAN DIRECTION	0	0	0	0	0
PERCENTAGE ZERO SPEEDS	0	0	0	0	0
MAXIMUM/MINIMUM U	0	0	0	0	0
MAXIMUM/MINIMUM V	0	0	0	0	0
MAXIMUM SPEED	0	0	0	0	0
DIRECTION OF MAX SPD	0	0	0	0	0
DEGREES TRUE	0	0	0	0	0

Figure 109.

[illegible]

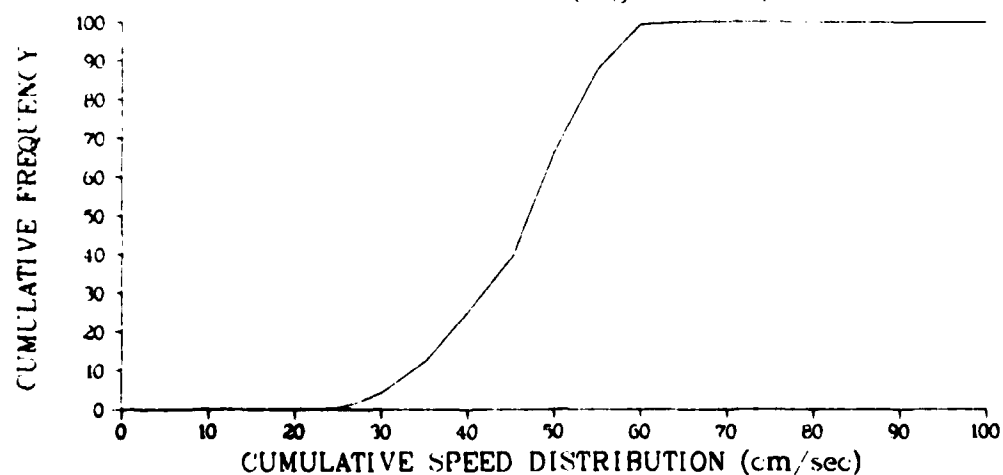
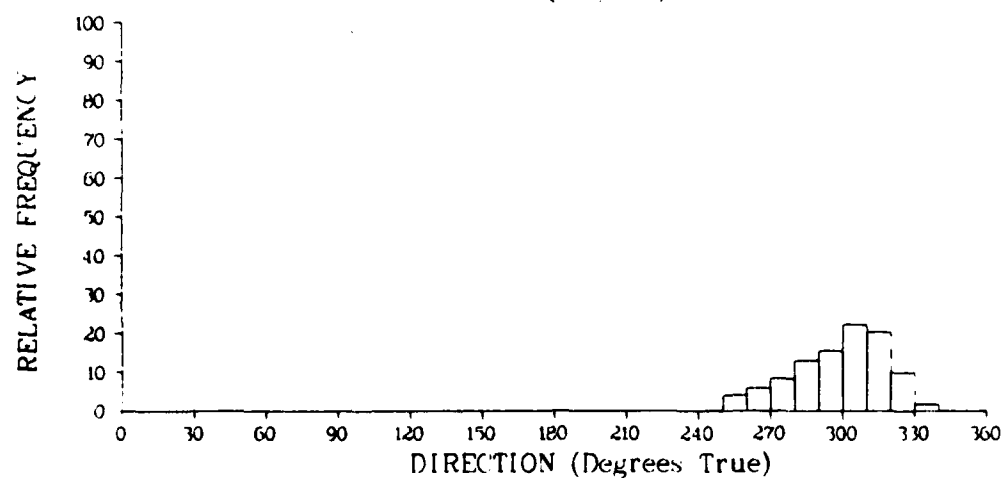
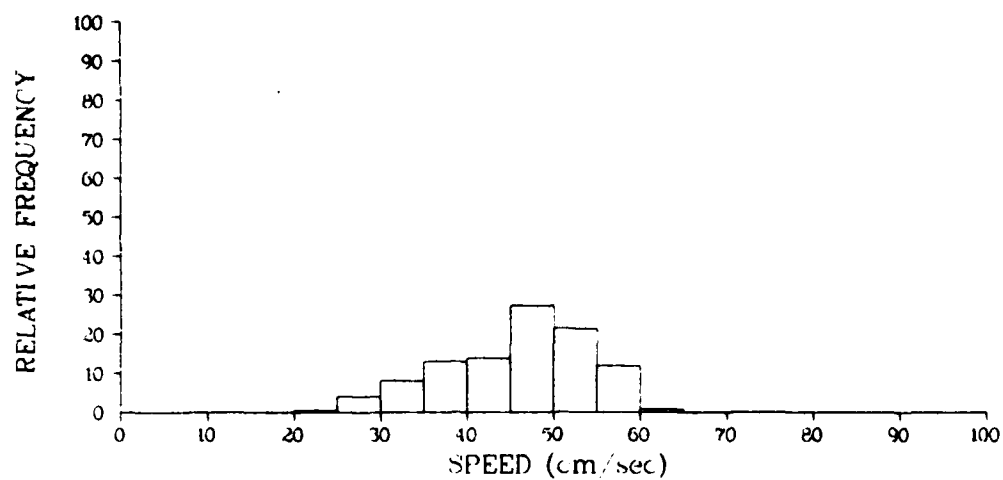
FILE: RCP		DATE: 10/14		TIME: 14/1		SITE: 10000		ELEV: 74416	
MEASUREMENTS		UNIT: CM/SEC		SCALE: 1000		MODE: 1000		MODE: 1000	
DEPT: 00000		UNIT: CM/SEC		SCALE: 1000		MODE: 1000		MODE: 1000	
0-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50-60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60-70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70-80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100-110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110-120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120-130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130-140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140-150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150-160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160-170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170-180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180-190	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190-200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200-210	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210-220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220-230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
230-240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240-250	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
250-260	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260-270	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270-280	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
280-290	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290-300	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300-310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310-320	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320-330	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330-340	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340-350	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350-360	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PER C1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NUMBER OF ZERO SPEEDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL NUMBER OF OBS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGE SCALAR SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STANDARD DEVIATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VECTORMEAN SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VECTORMEAN DIRECTION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PERCENTAGE ZERO SPEEDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAXIMUM/MINIMUM U	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAXIMUM/MINIMUM V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAXIMUM SPEED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DIRECTION OF MAX SP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 111.



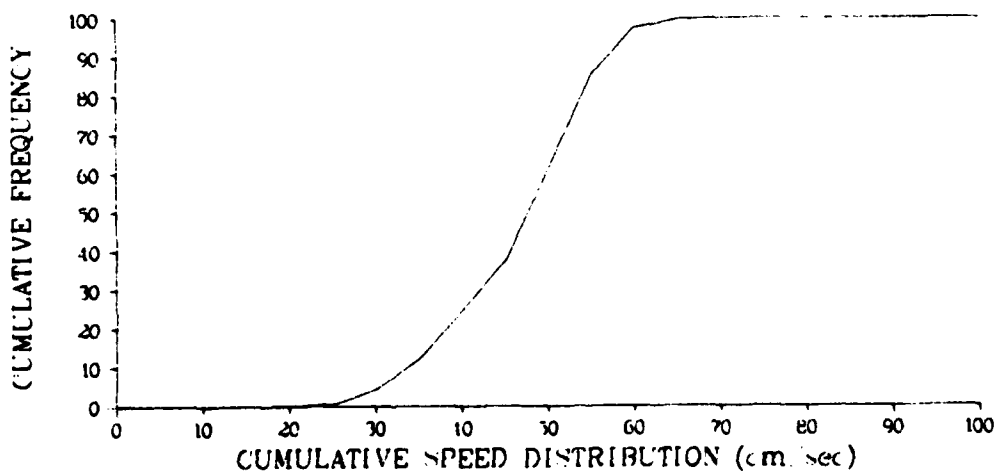
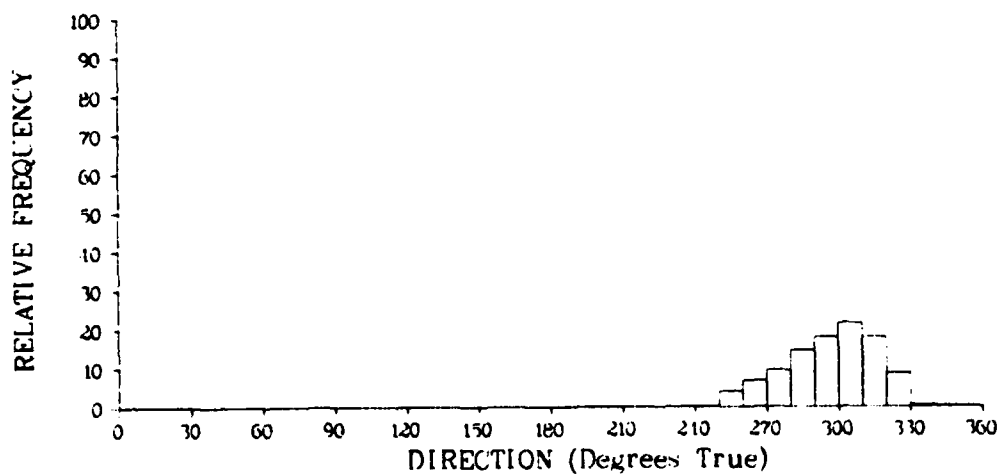
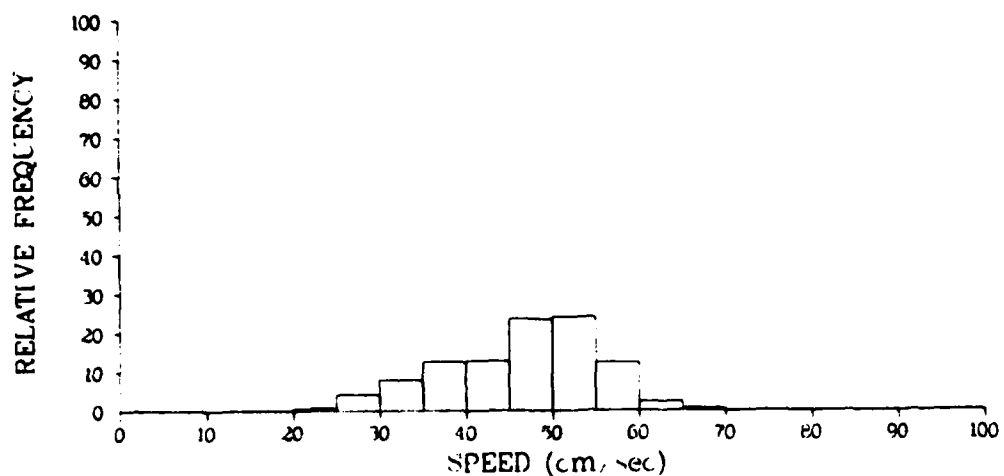
File	ACM	Array	ATOM79
Meter	790100	Depth	000123
Latitude	25.805555	Start	20 DEC 1979
Longitude	-89.744165	End	

Figure 112.



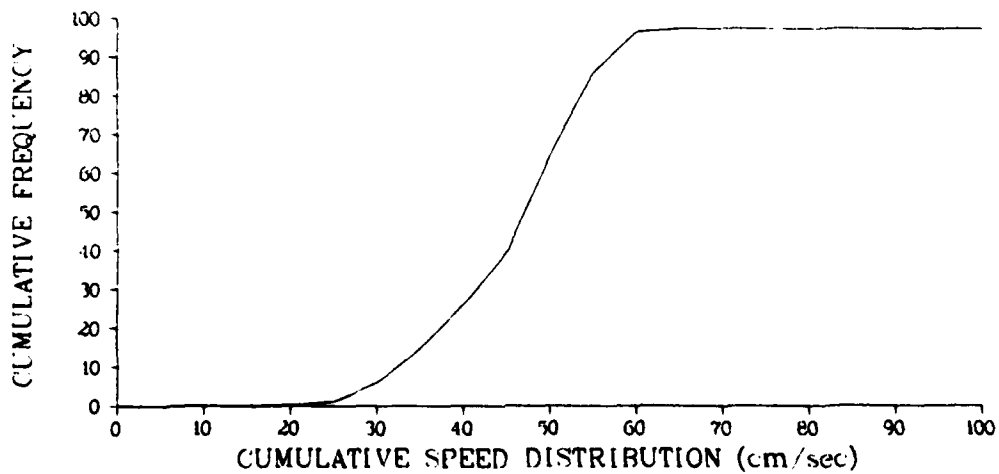
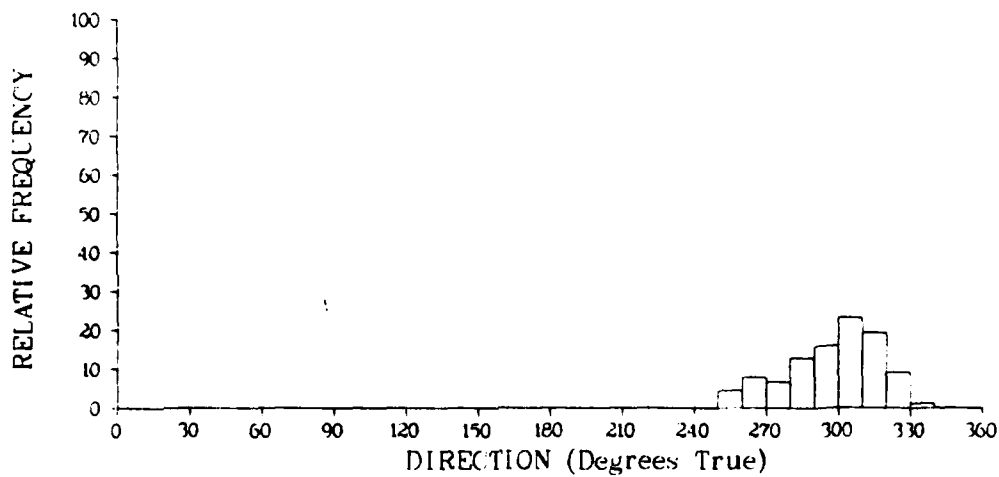
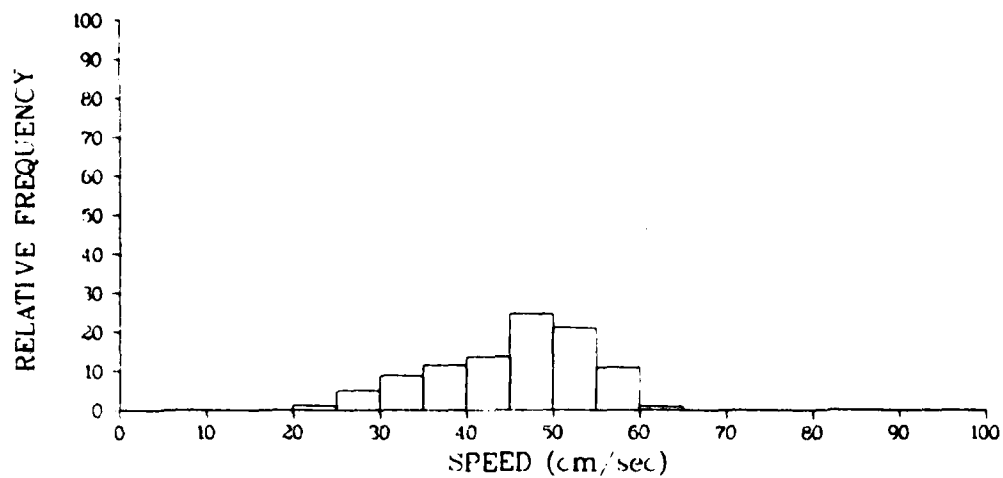
File	ACM	Array	ATOM79
Meter	790100	Depth	000130
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 71165	End	

Figure 113.



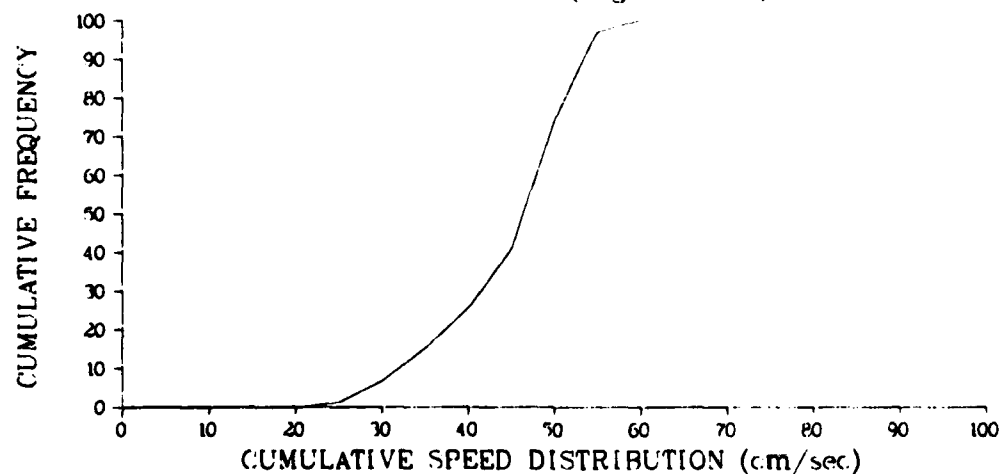
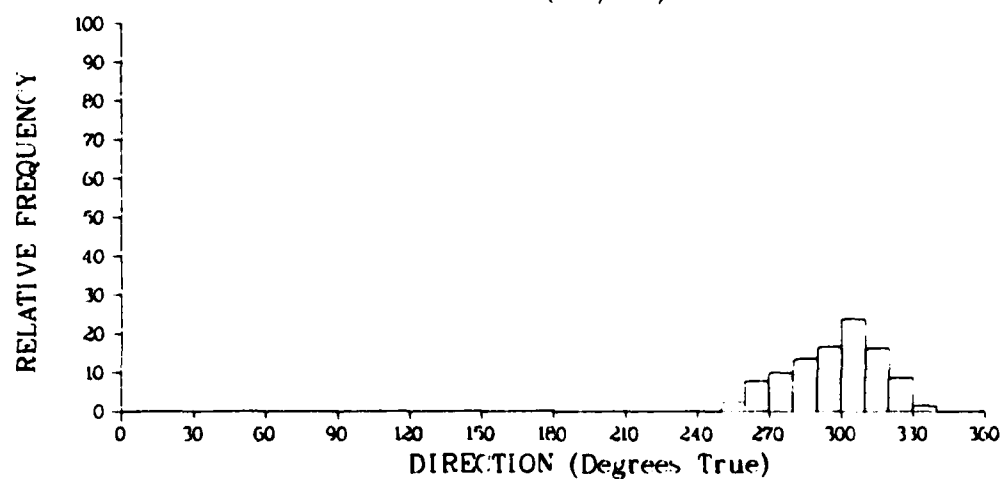
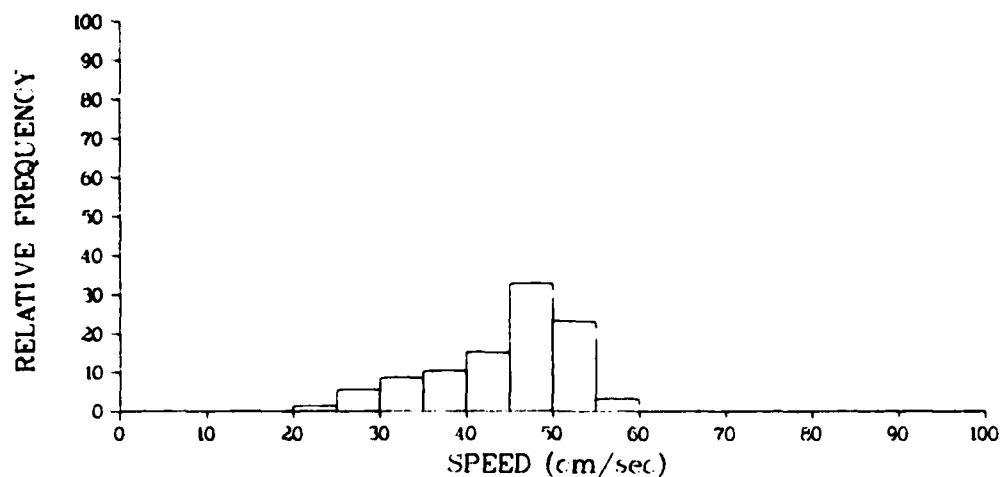
File	ACM	Array	ATOM79
Meter	790100	Depth	000137
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 74165	End	

Figure 114.



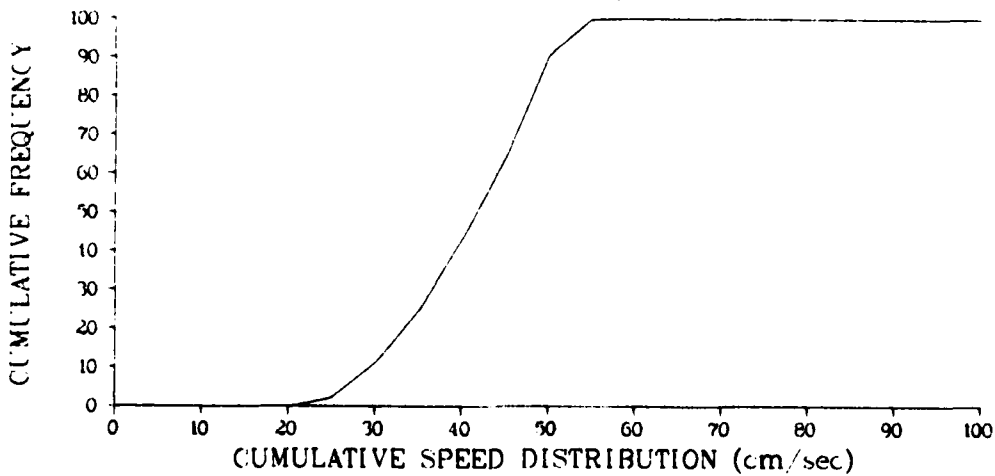
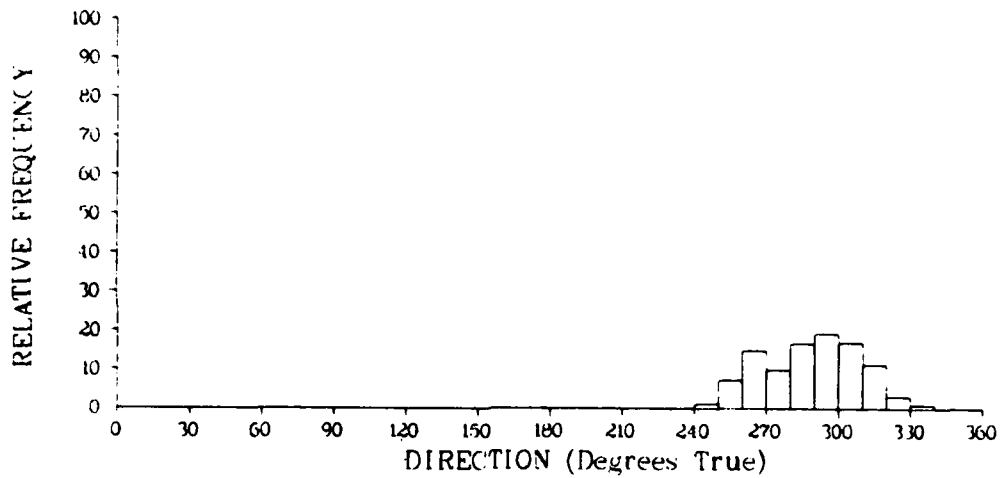
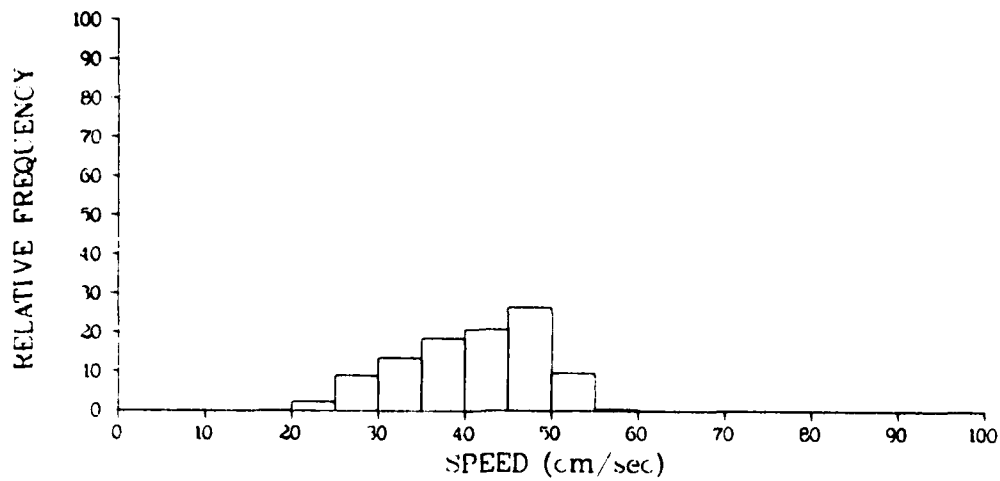
File	ACM	Array	ATOM79
Meter	790100	Depth	000144
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 74165	End	

Figure 115.



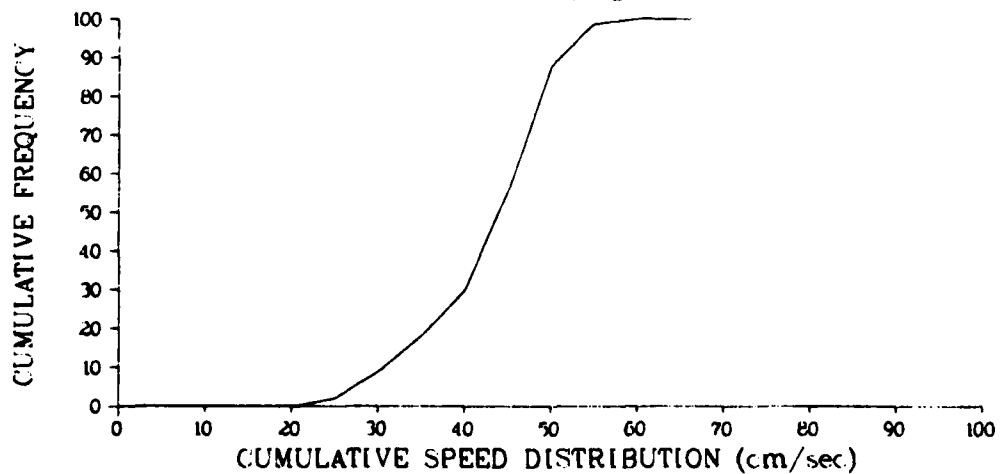
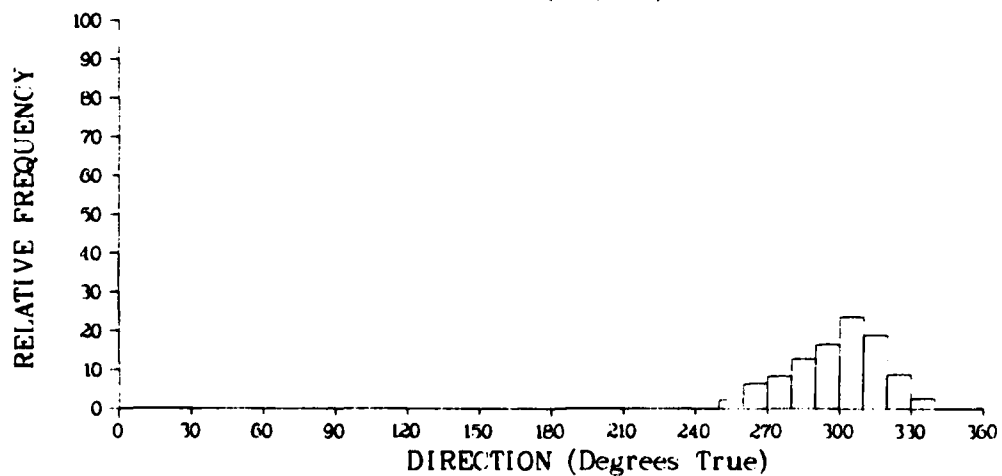
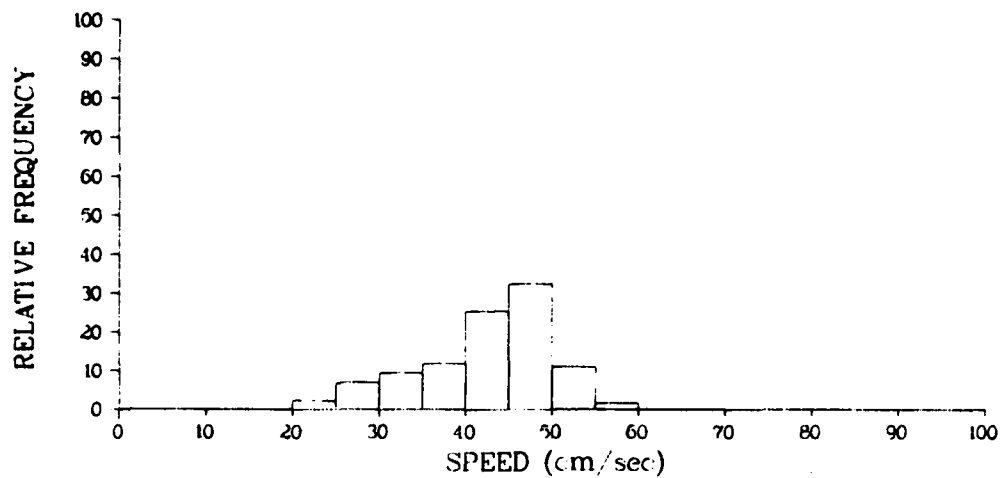
File	ACM	Array	ATOM79
Meter	790100	Depth	000151
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 74165	End	

Figure 116.



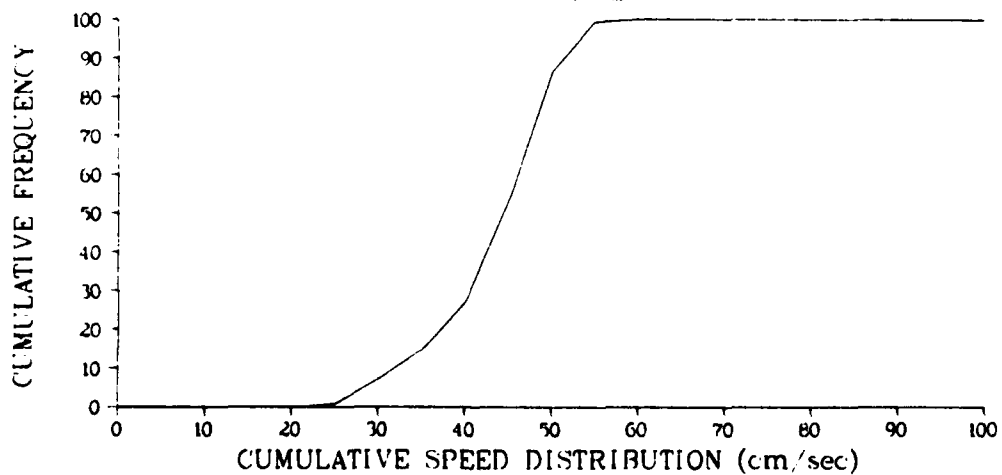
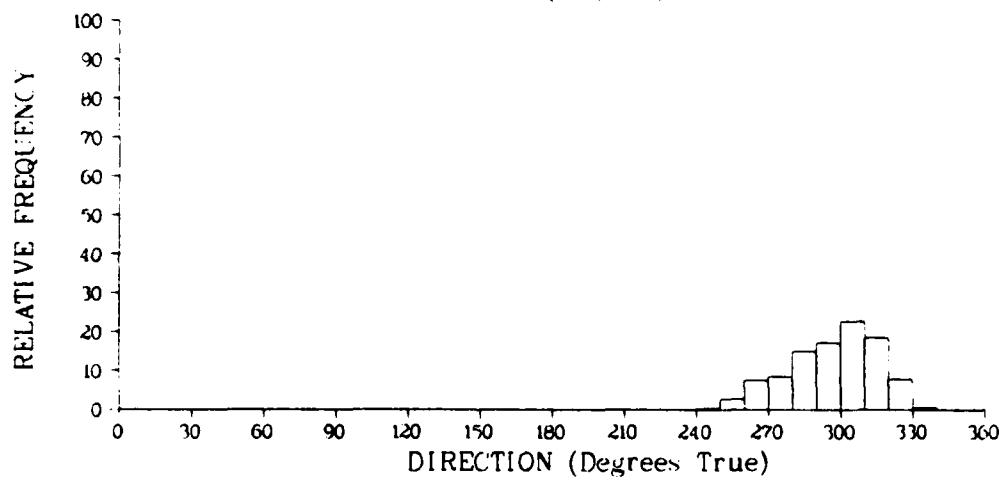
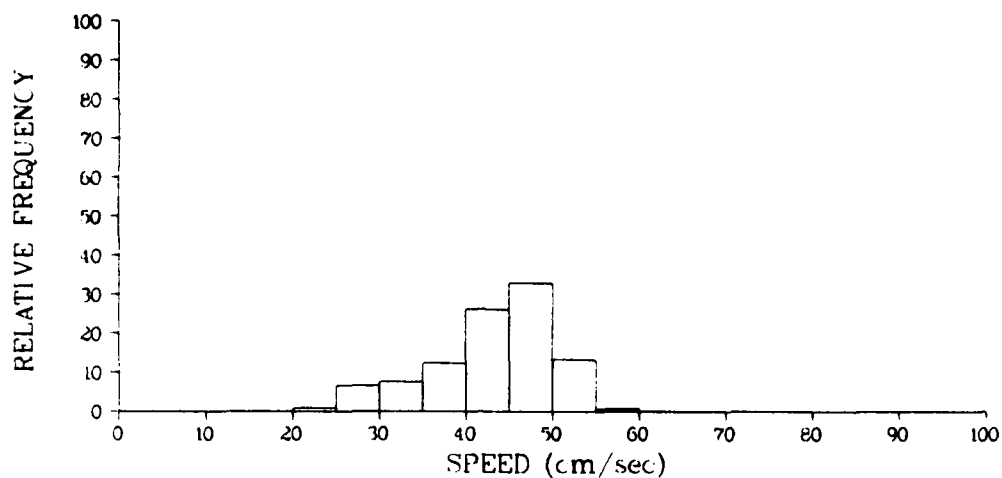
File	ACM	Array	ATOM79
Meter	790100	Depth	000158
Latitude	25 805555	Start	20 DEC 1
Longitude	-89 74165	End	

Figure 117.



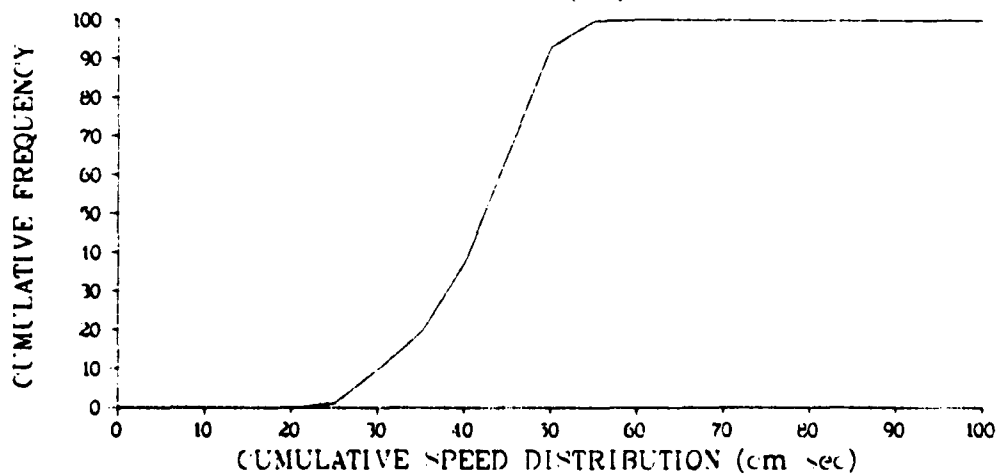
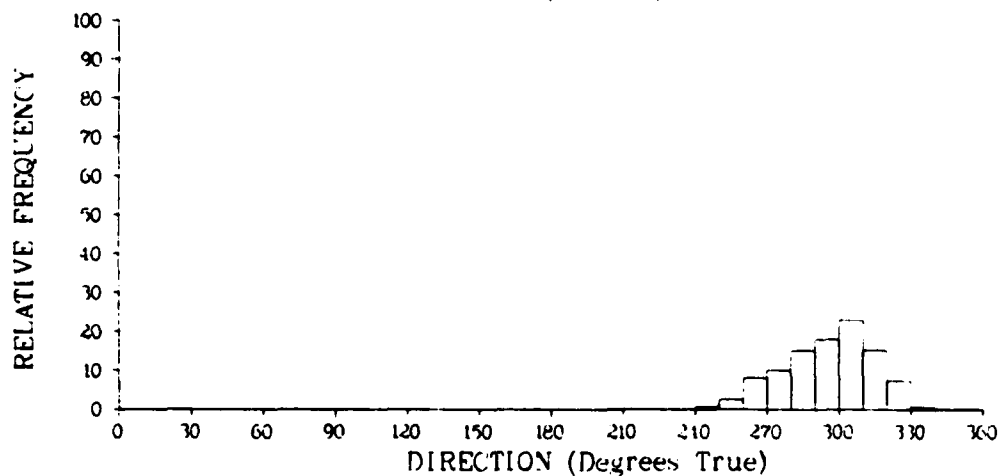
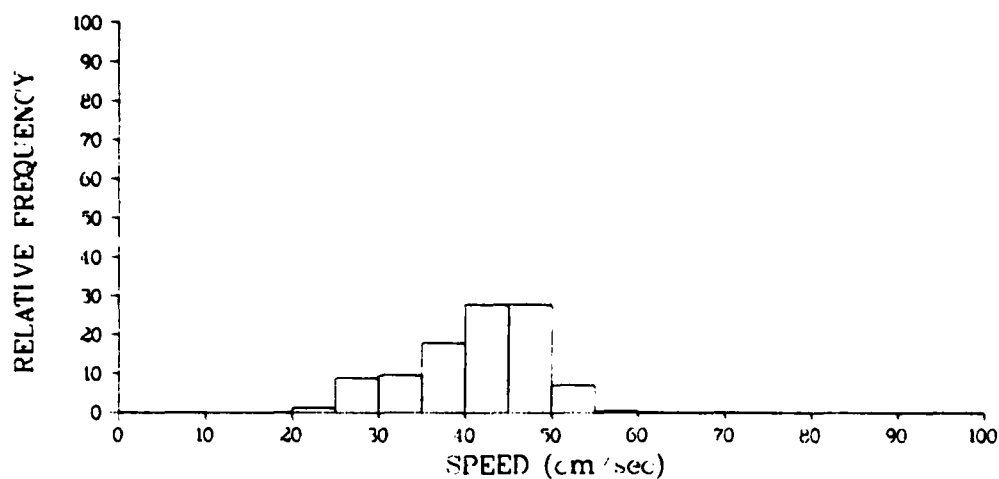
File	ACM	Array	ATOM79
Meter	790100	Depth	000165
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 74165	End	

Figure 118.



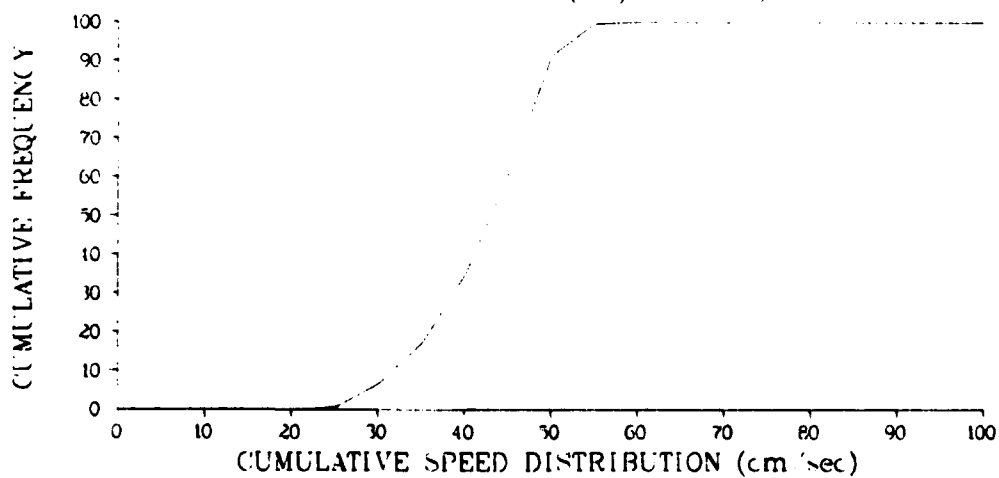
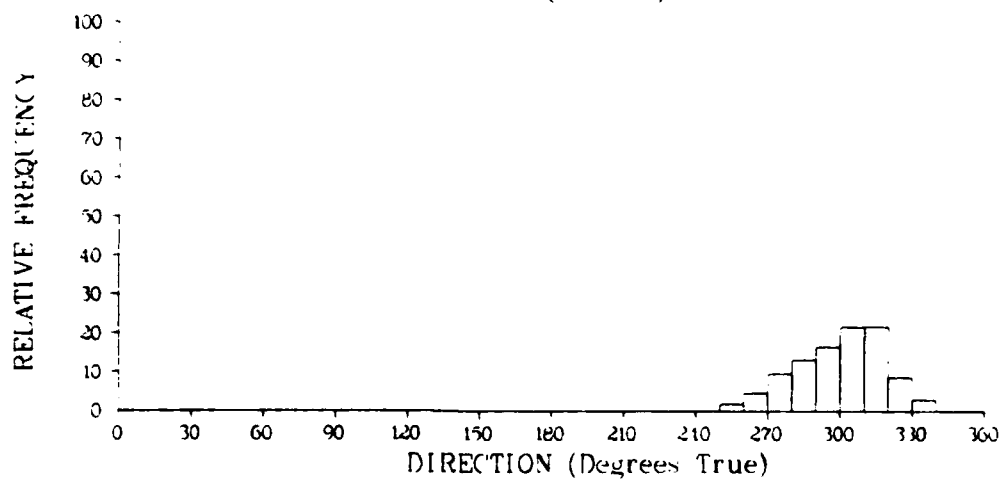
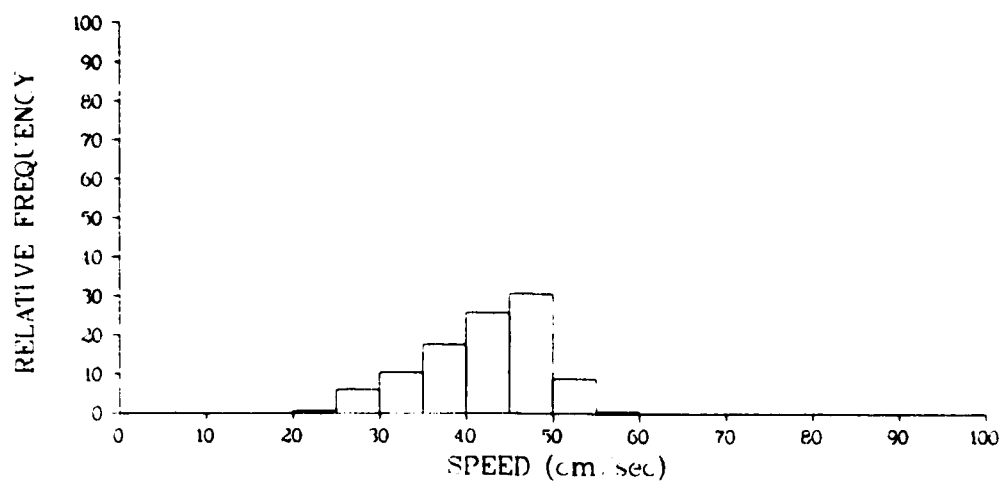
File	ACM	Array	ATOM79
Meter	790100	Depth	000172
Latitude	25 805555	Start	20 DEC 79
Longitude	-89 714165	End	

Figure 119.



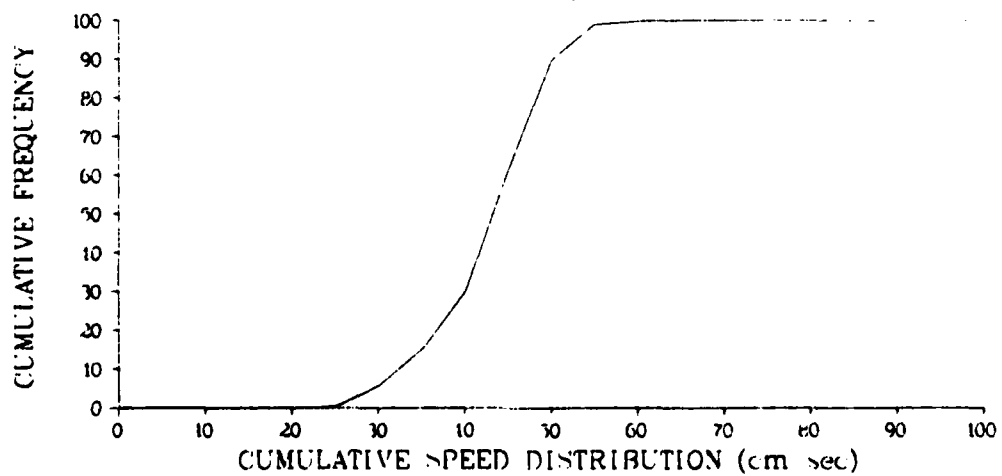
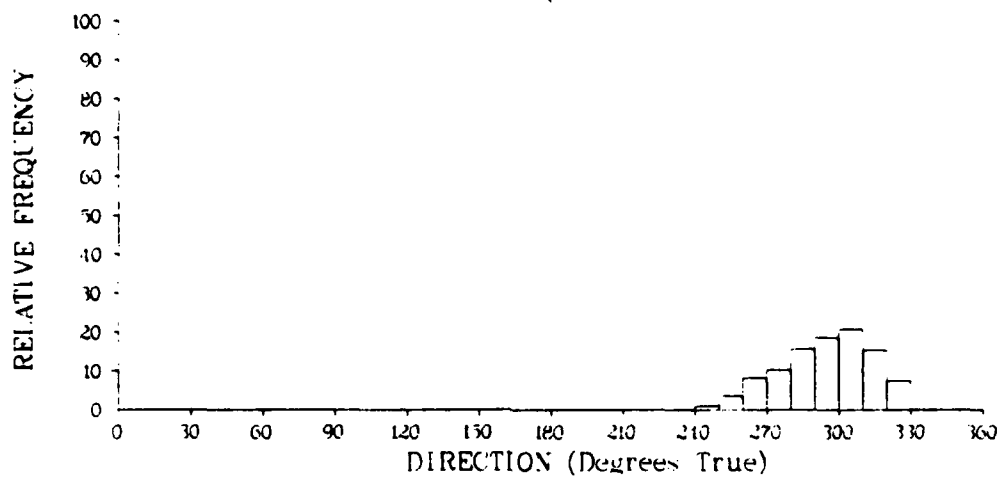
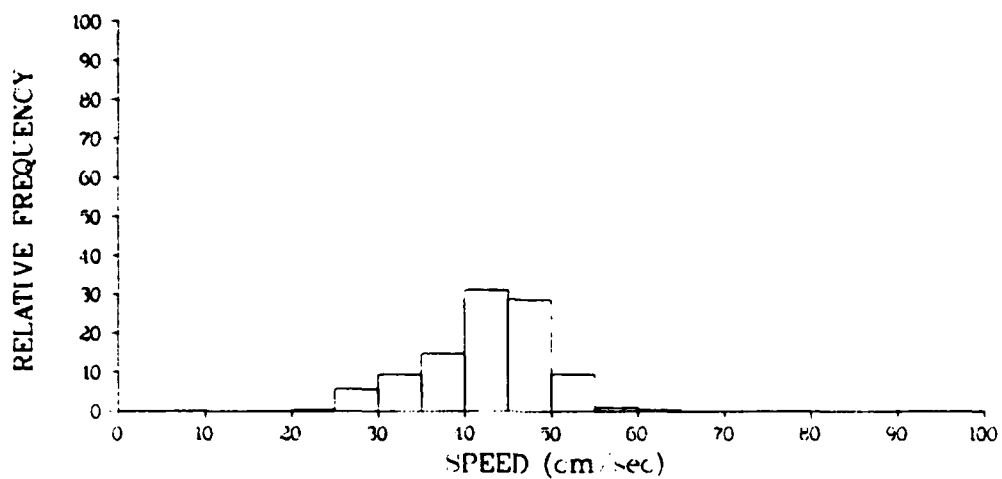
File	ACM	Array	ATOM79
Meter	790100	Depth	000179
Latitude	25 805535	Start	20 DEC 1979
Longitude	-89 744165	End	

Figure 120.



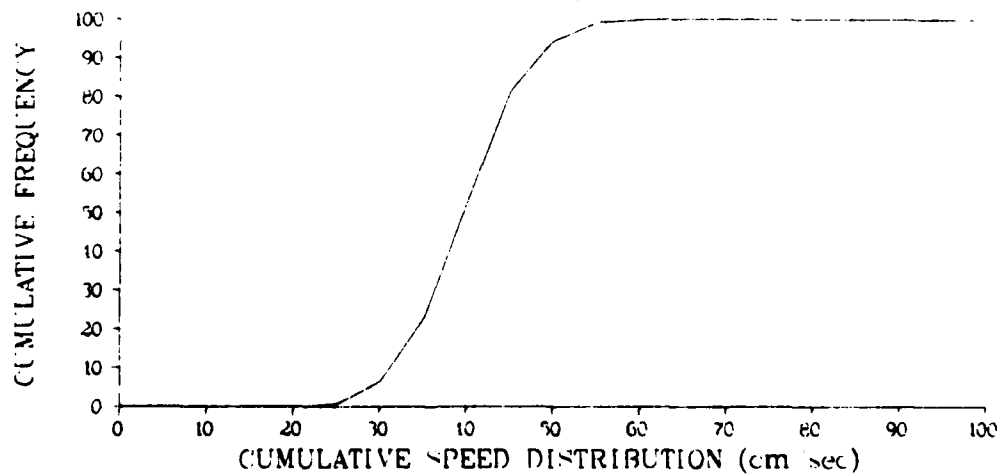
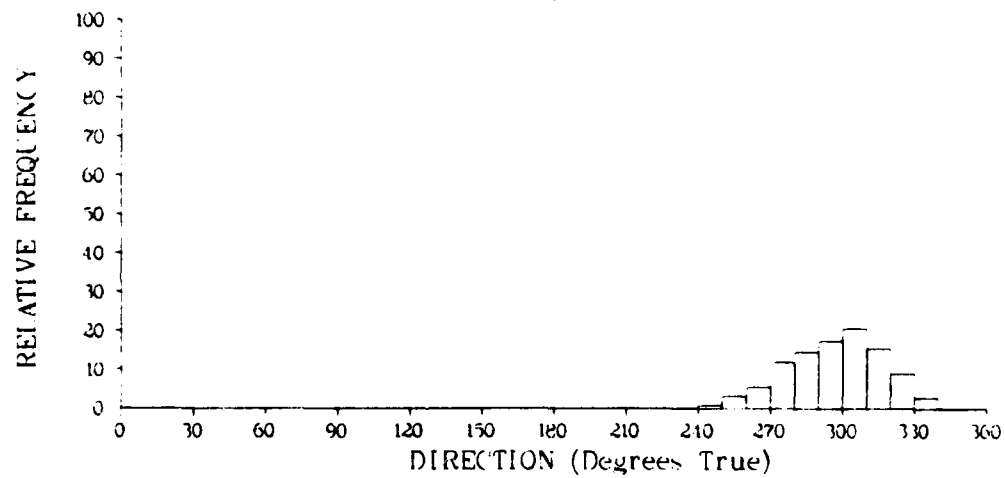
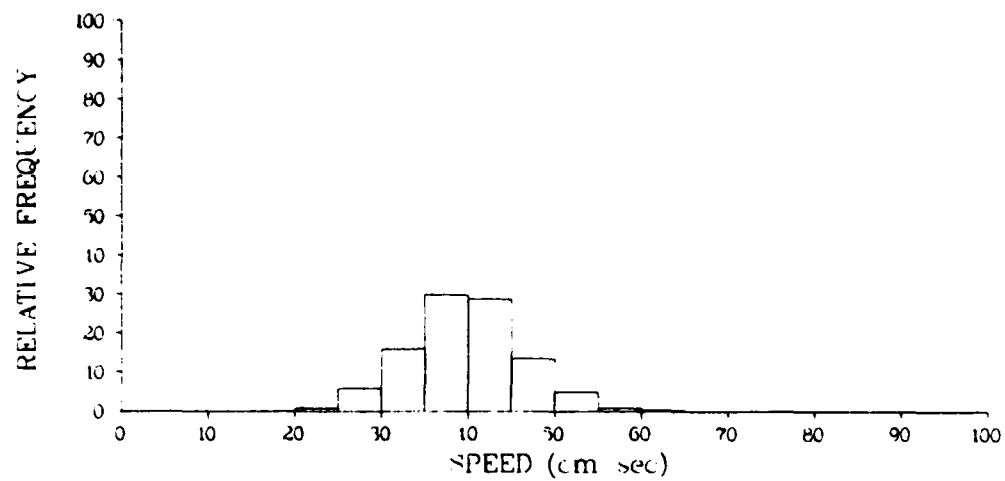
File	ACM	Array	ATOM79
Meter	790100	Depth	000186
Latitude	25 805333	Start	20 DEC 1959
Longitude	-89 741165	End	

Figure 121.



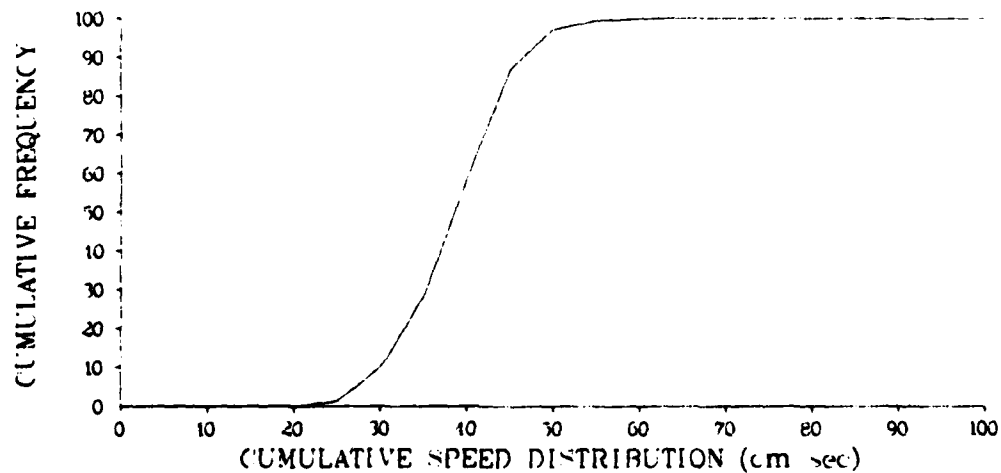
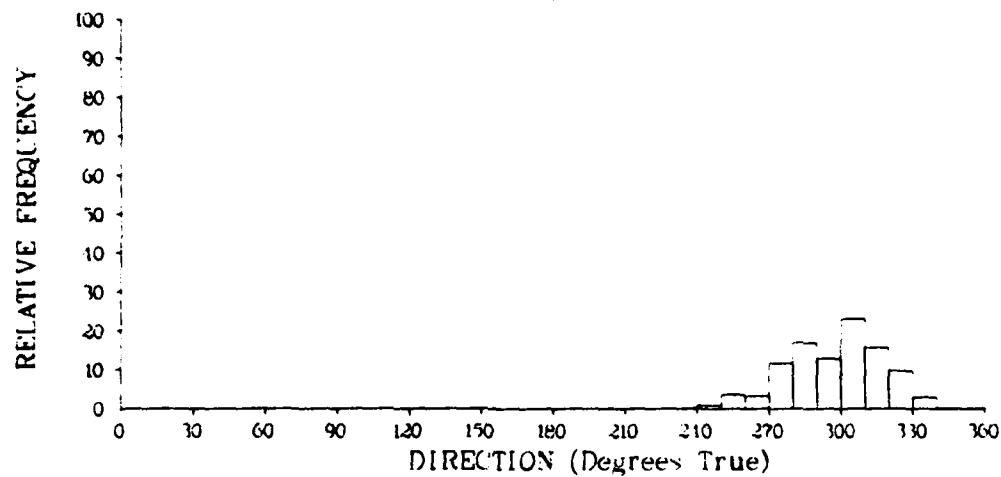
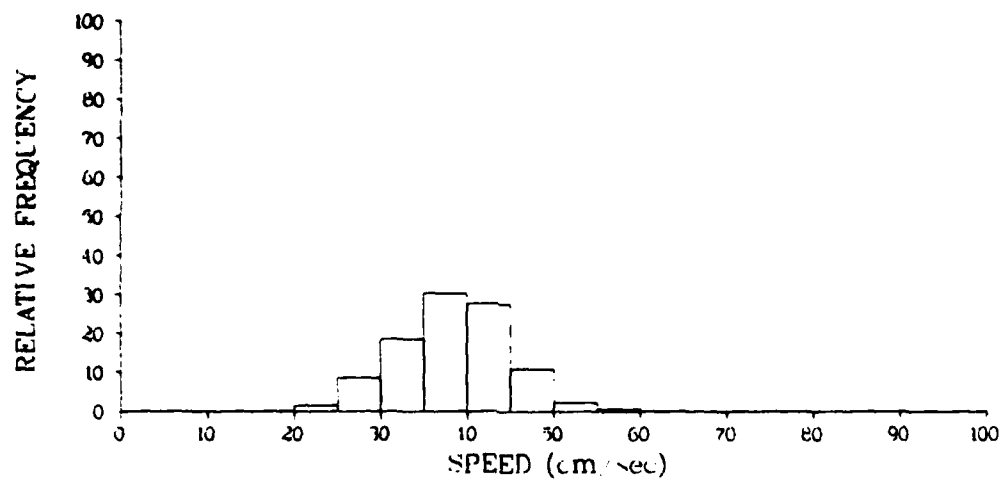
File	ACM	Array	ATOM79
Meter	790100	Depth	000193
Latitude	25 805333	Start	20 DEC 1979
Longitude	-89 714165	End	

Figure 122.



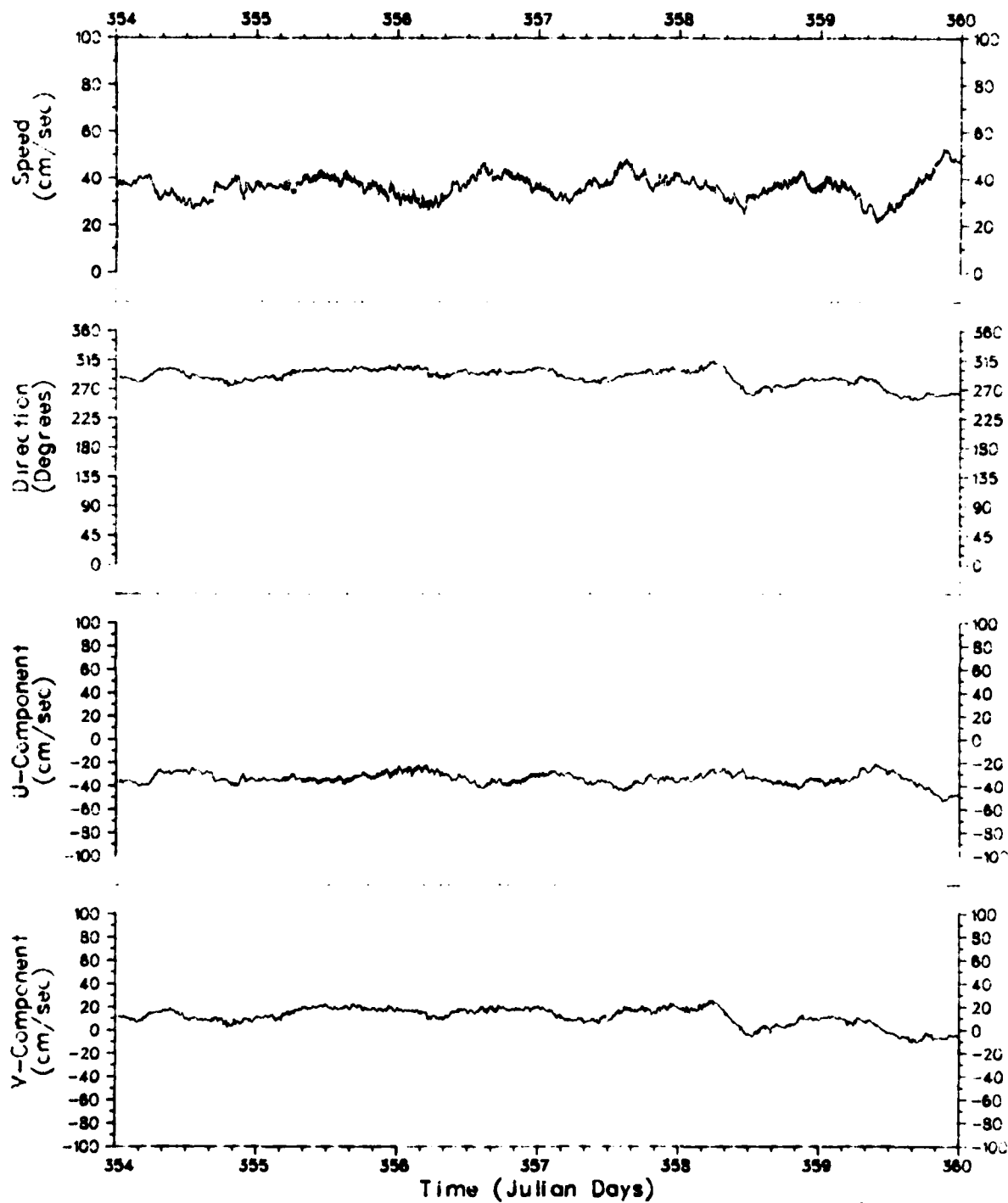
File	ACM	Array	ATOM79
Meter	790100	Depth	000200
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 741165	End	

Figure 123.



File	ACM	Array	ATOM79
Meter	790100	Depth	000307
Latitude	25 805555	Start	20 DEC 1979
Longitude	-89 71165	End	

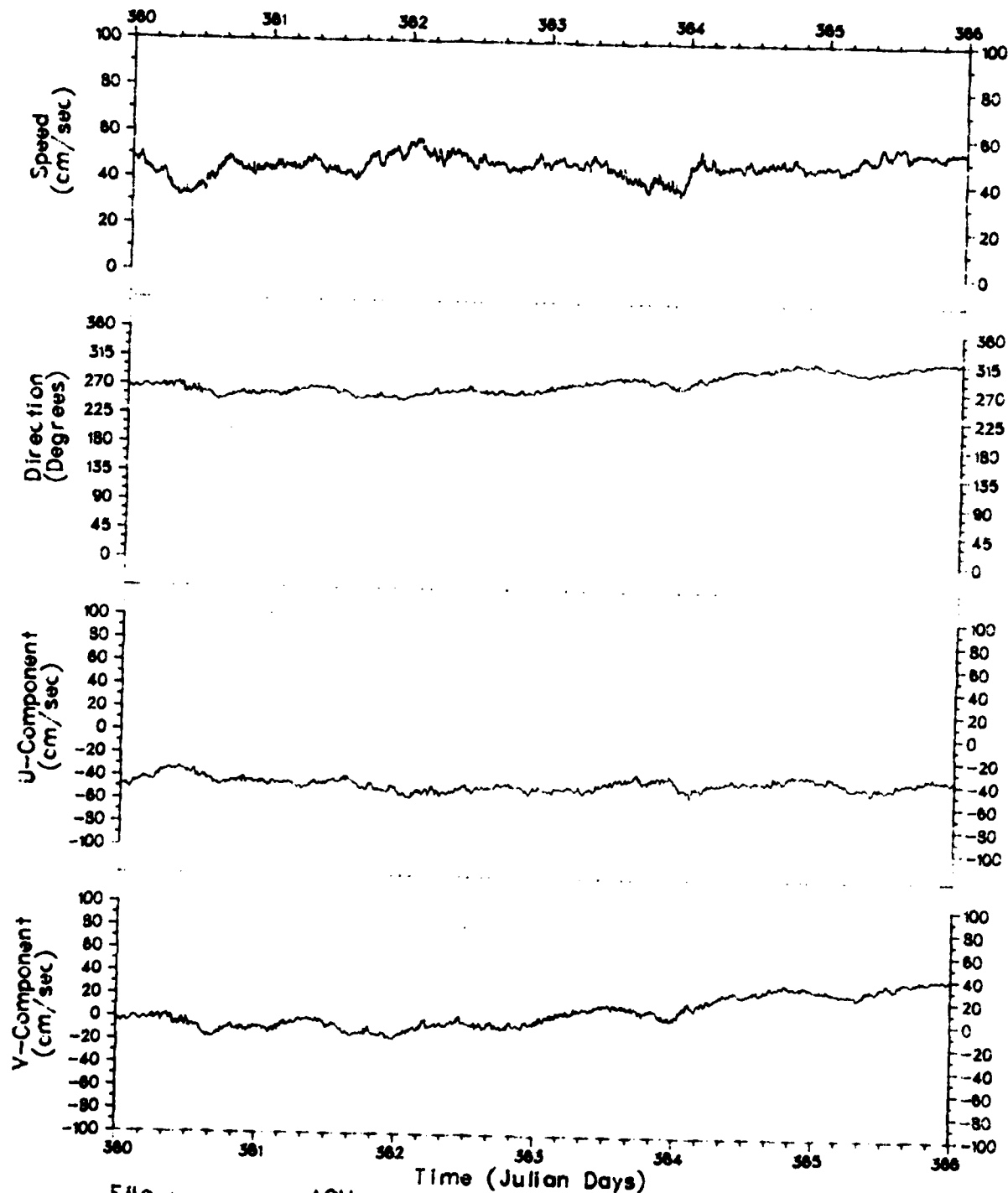
Figure 124.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000123
 Start : 19 12 1979
 End : 14 01 1980

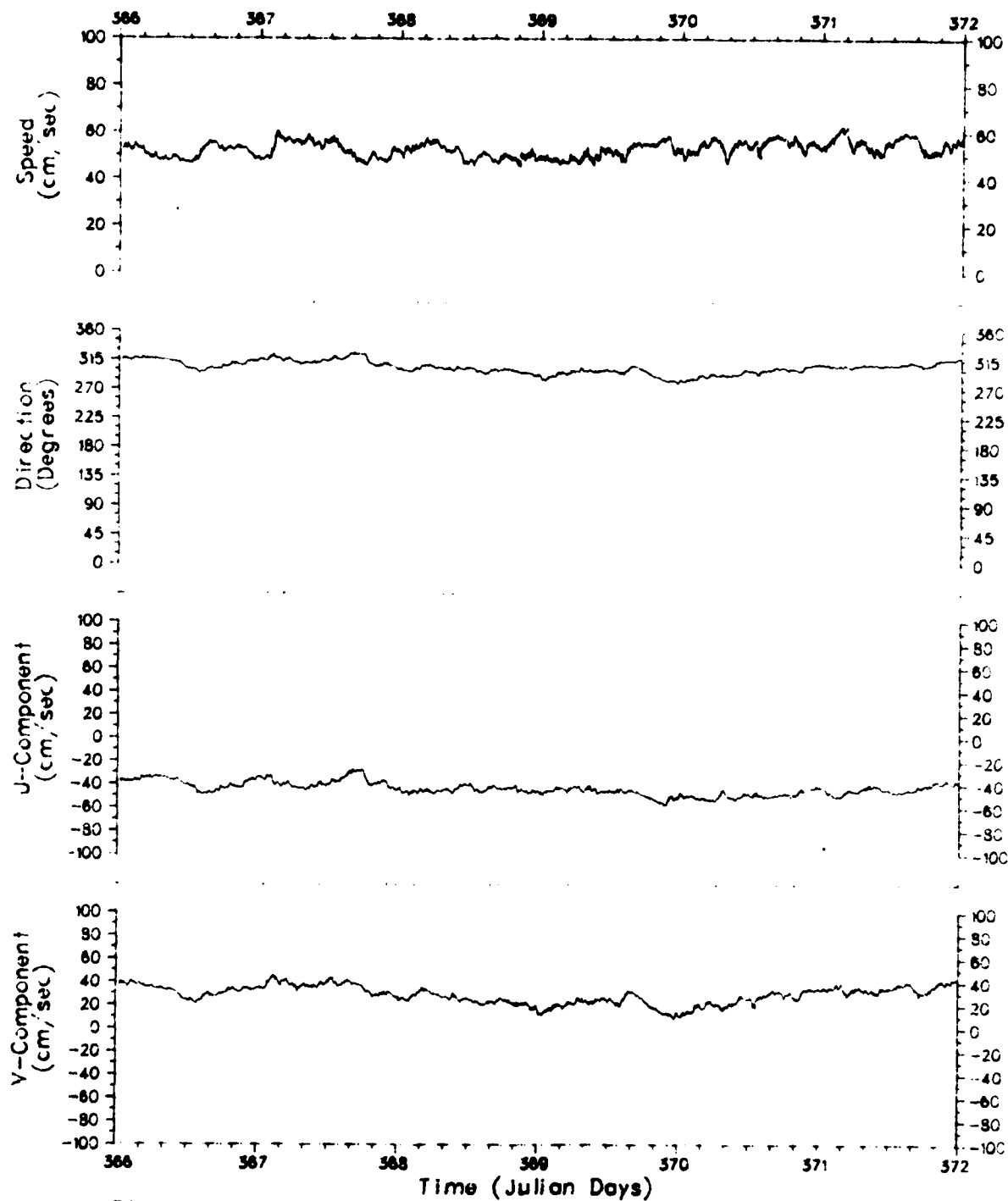
Figure 125.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000123
 Start : 19 12 1979
 End : 14 01 1980

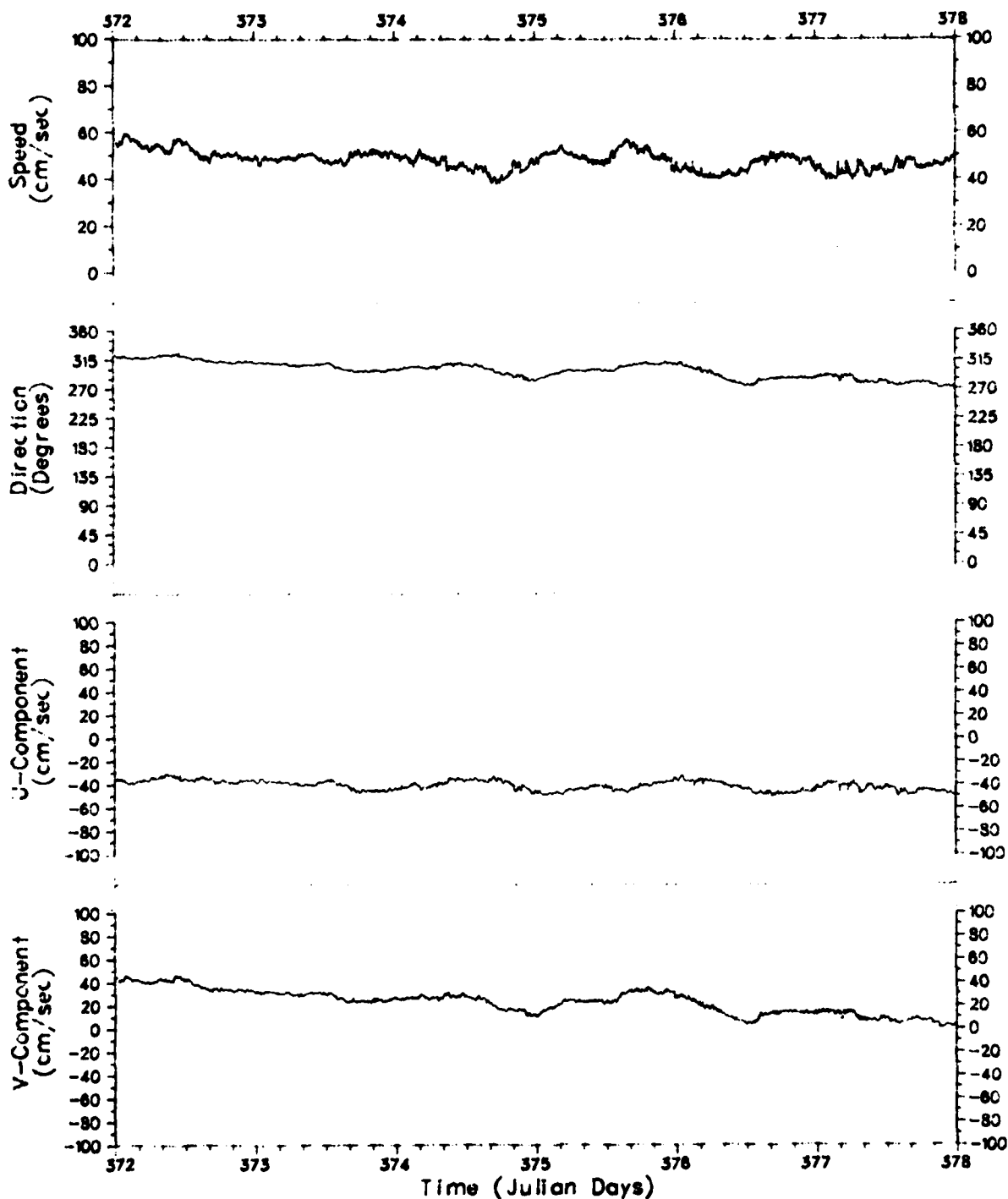
Figure 126.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000123
 Start : 19 12 1979
 End : 14 01 1980

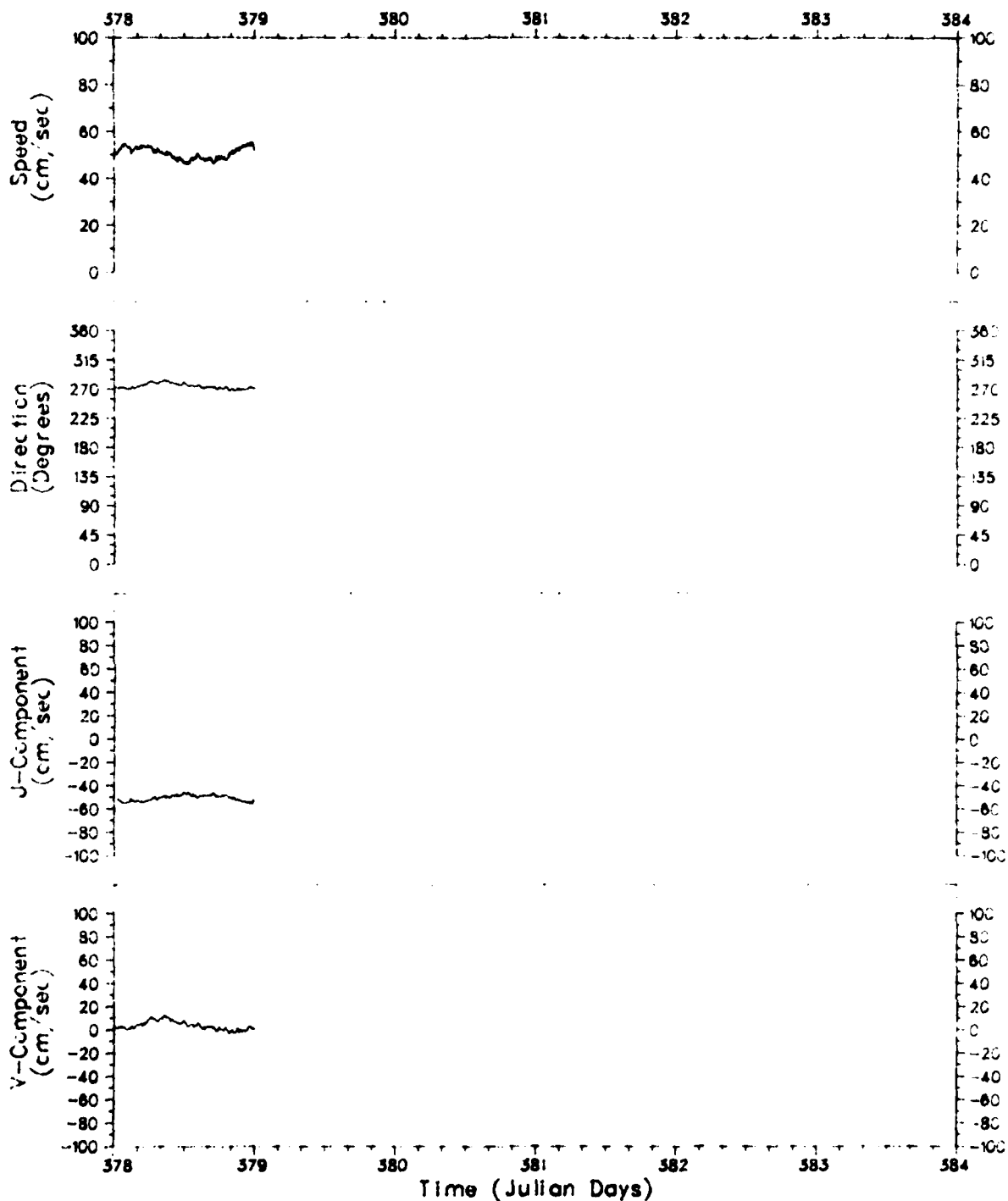
Figure 127.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000123
 Start : 19 12 1979
 End : 14 01 1980

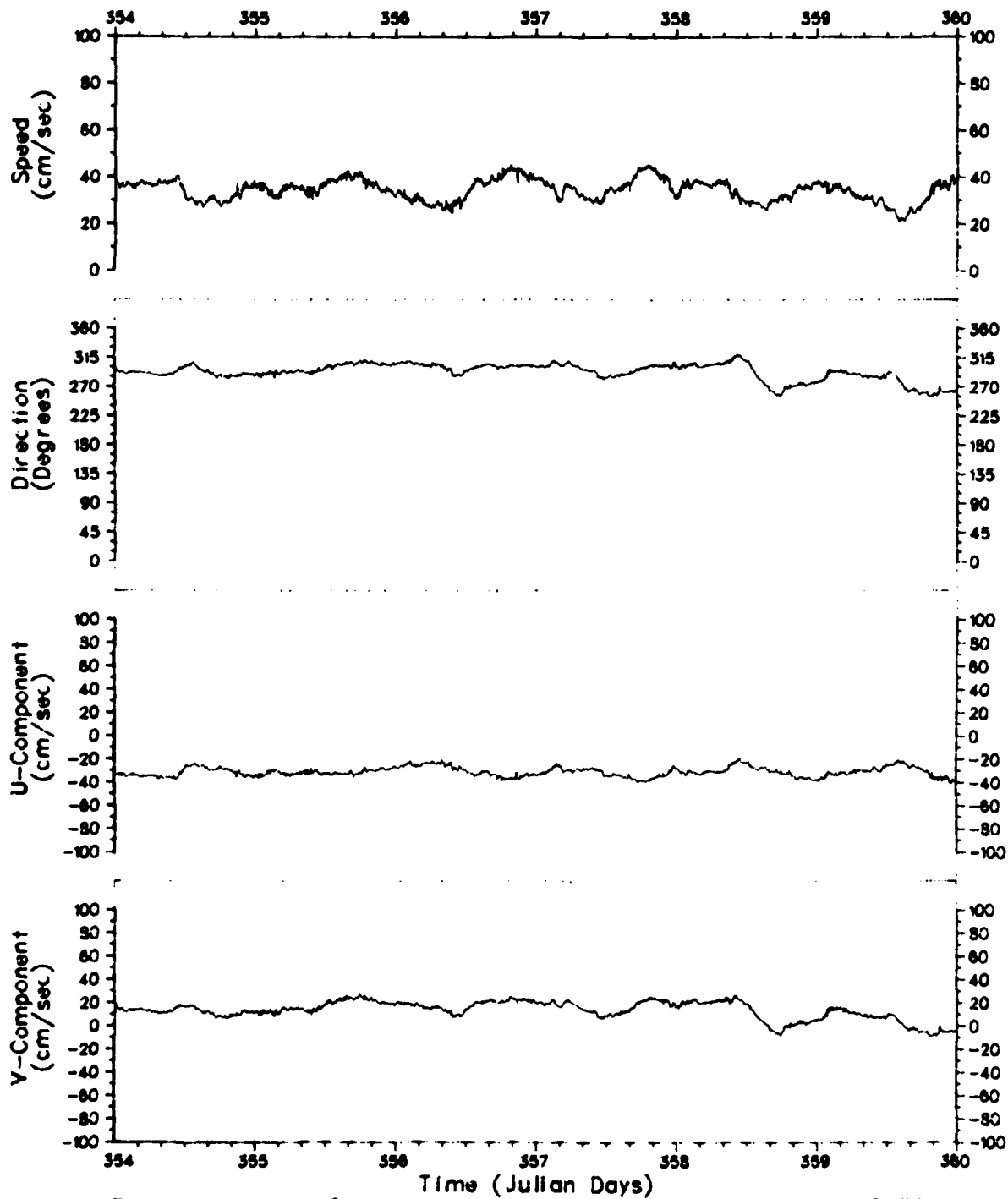
Figure 128.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000123
 Start : 19 12 1979
 End : 14 01 1 0

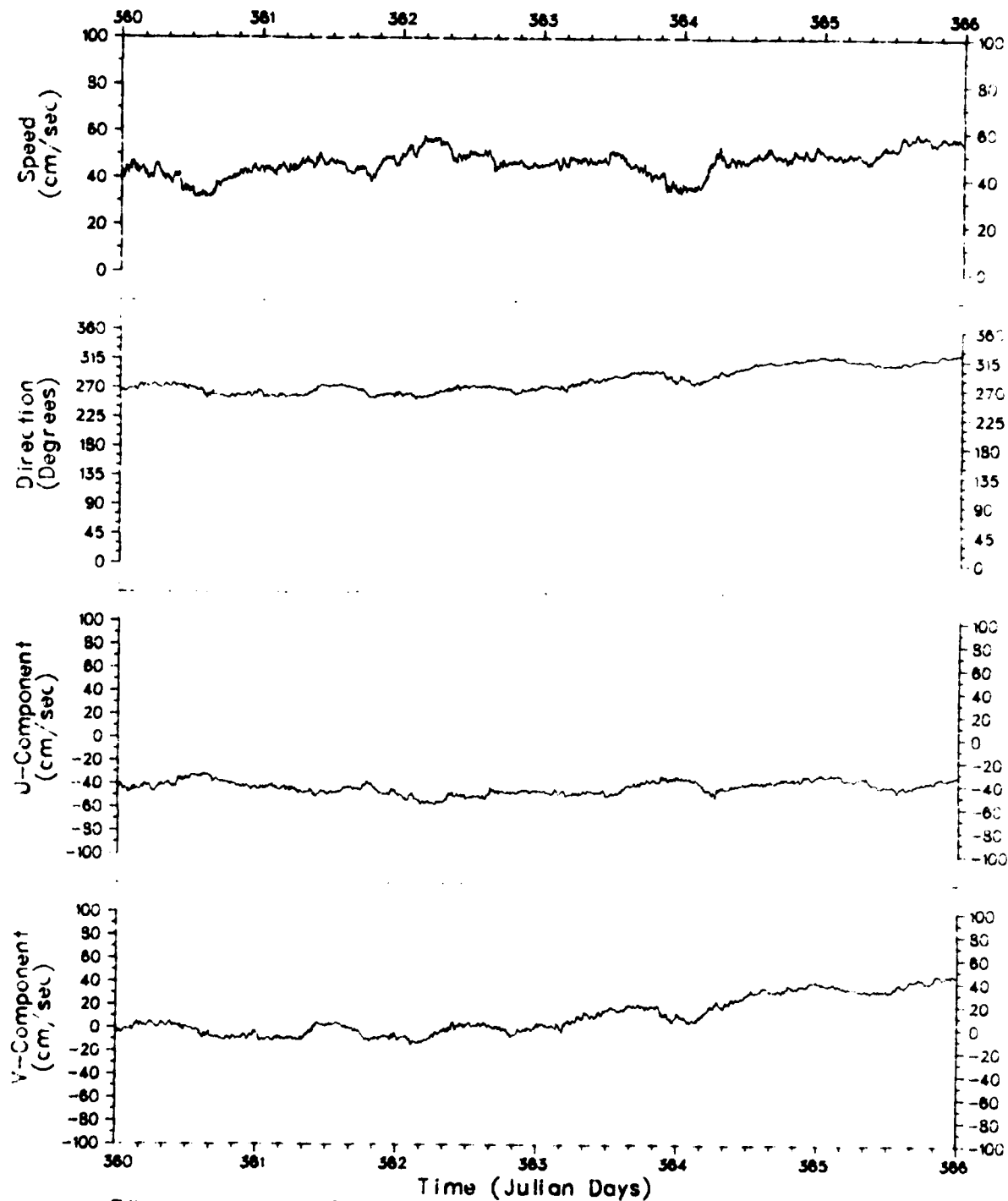
Figure 129.



File : ACM
 Meter : 790100
 Latitude : 25.905555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000130
 Start : 19 12 1979
 End : 14 01 1980

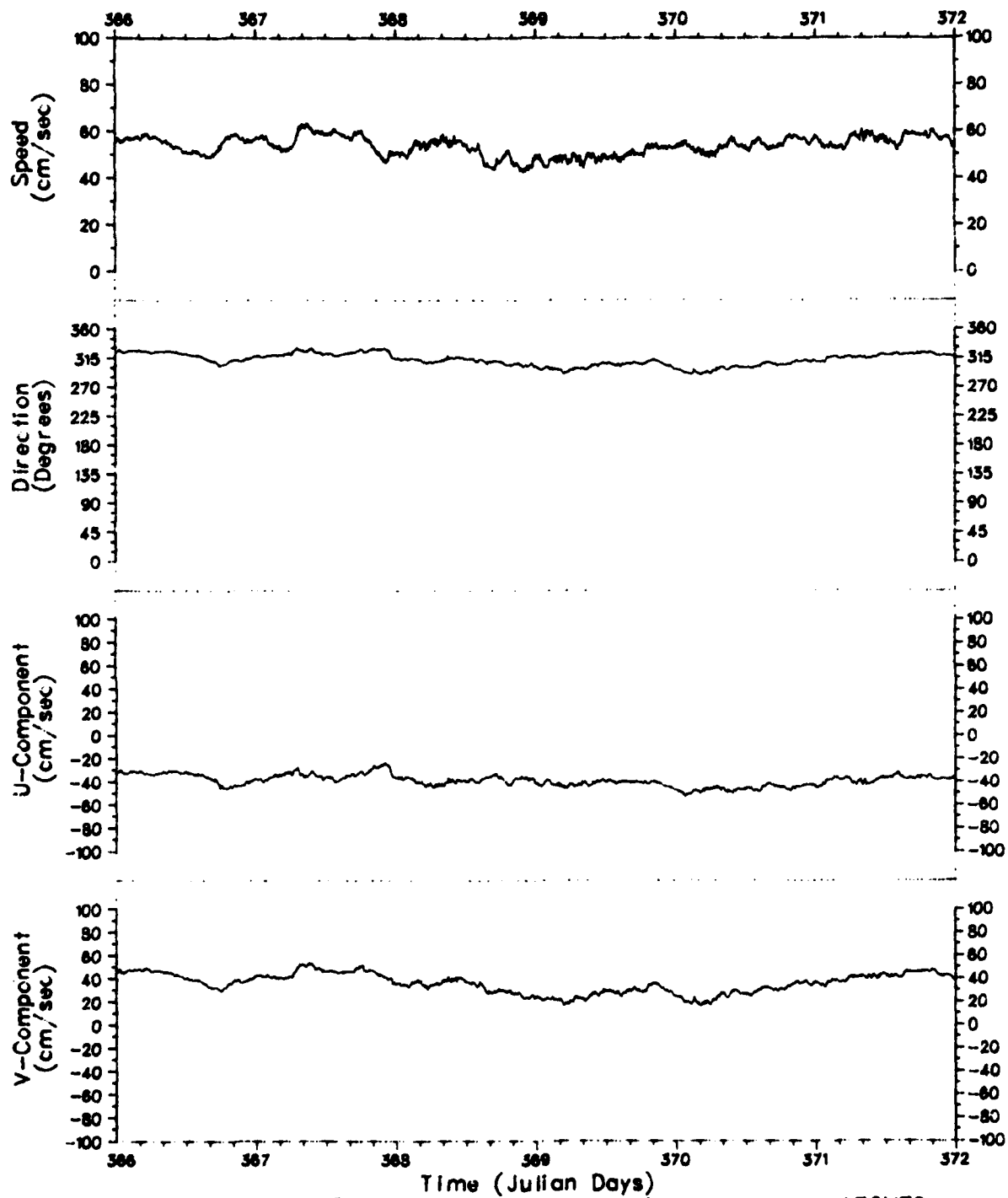
Figure 130.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000130
 Start : 19 12 1979
 End : 14 01 1980

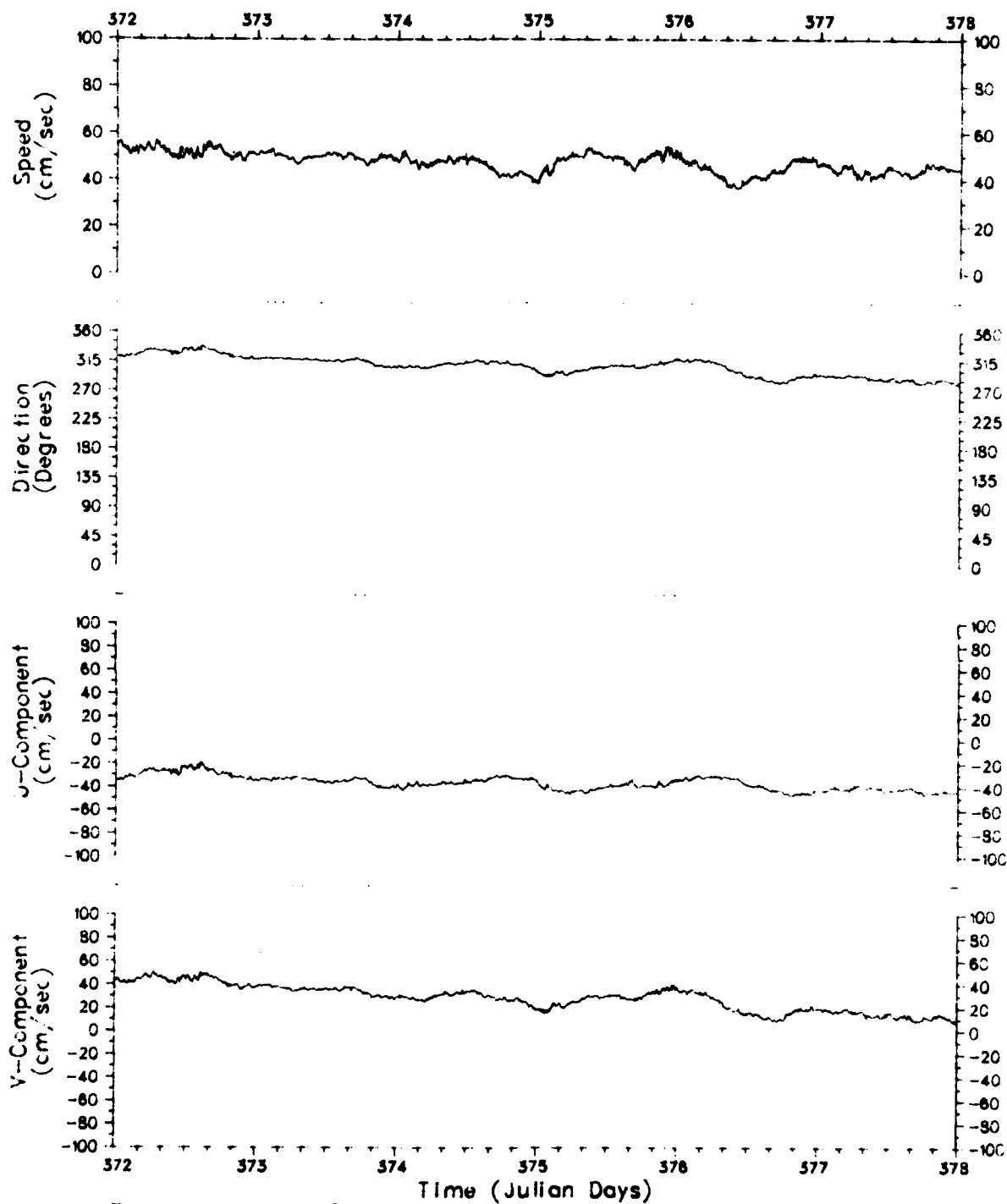
Figure 131.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000130
 Start : 19 12 1979
 End : 14 01 1980

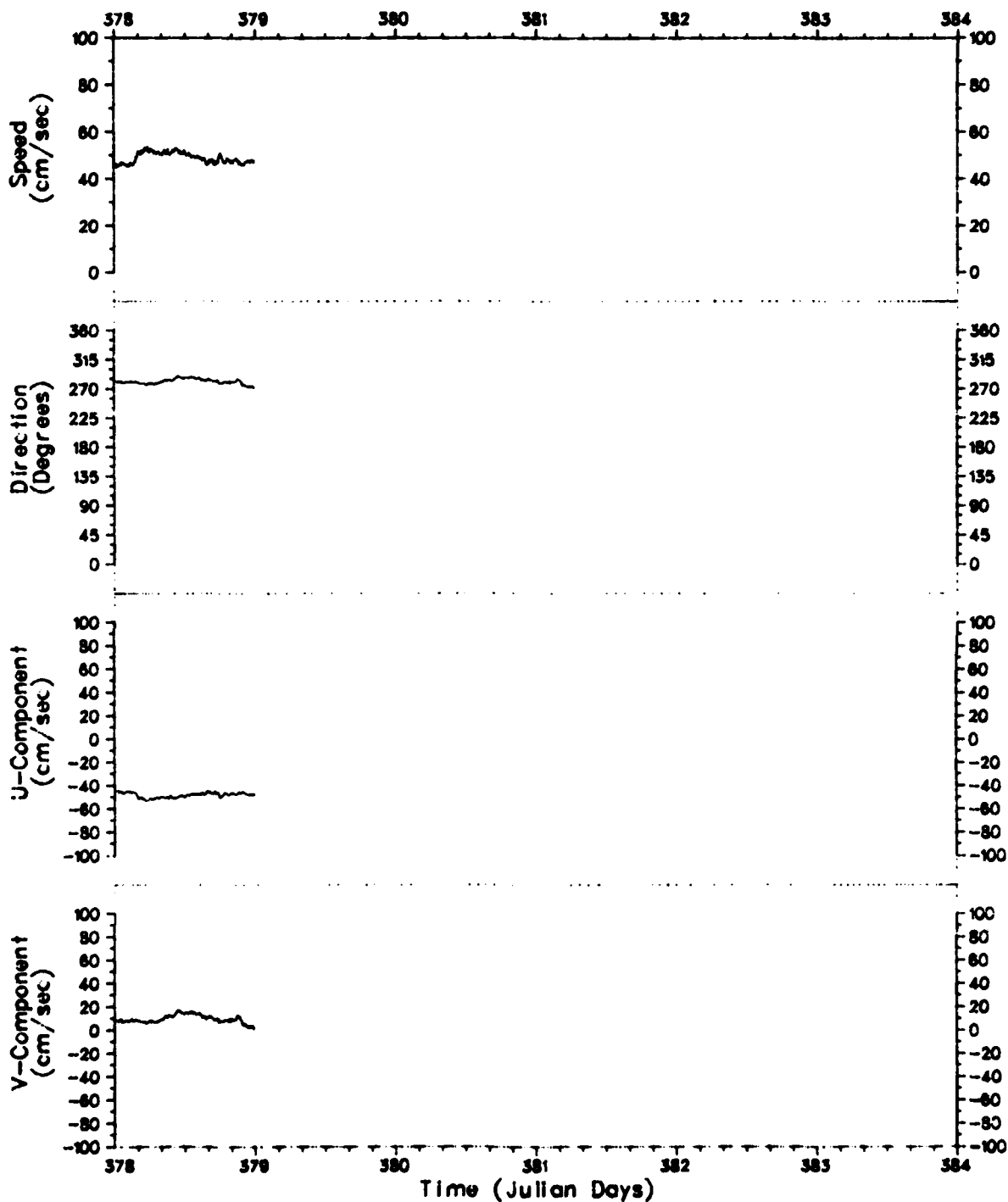
Figure 132.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000130
 Start : 19 12 1979
 End : 14 01 1980

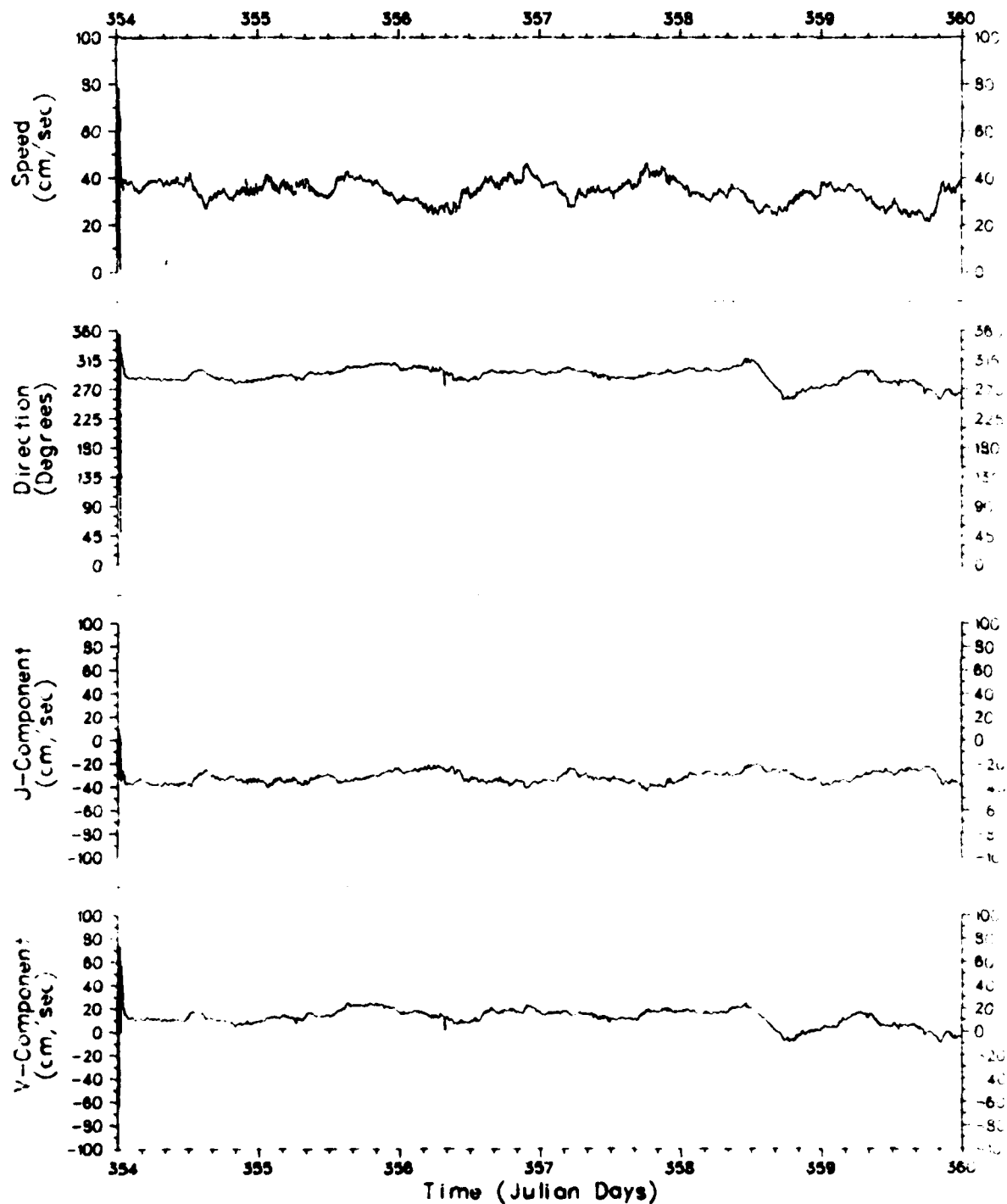
Figure 133.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

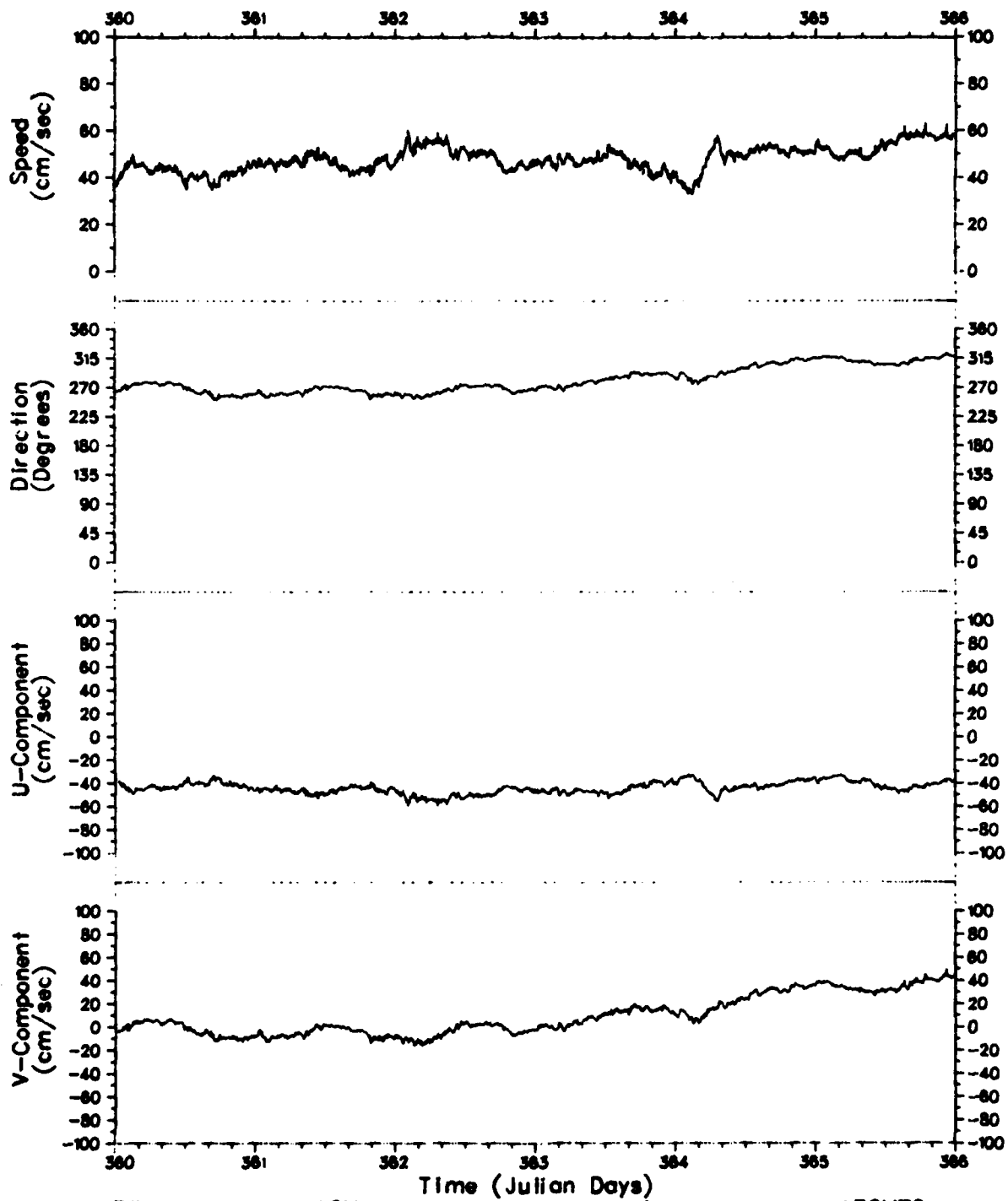
Array : ATOM79
 Depth : 000130
 Start : 19 12 1979
 End : 14 01 1980

Figure 134.



File	ACM	Array	ATOM79
Meter	790100	Depth	000137
Latitude	25.905555	Start	19 12 1979
Longitude	-89 744165	End	14 01 1980

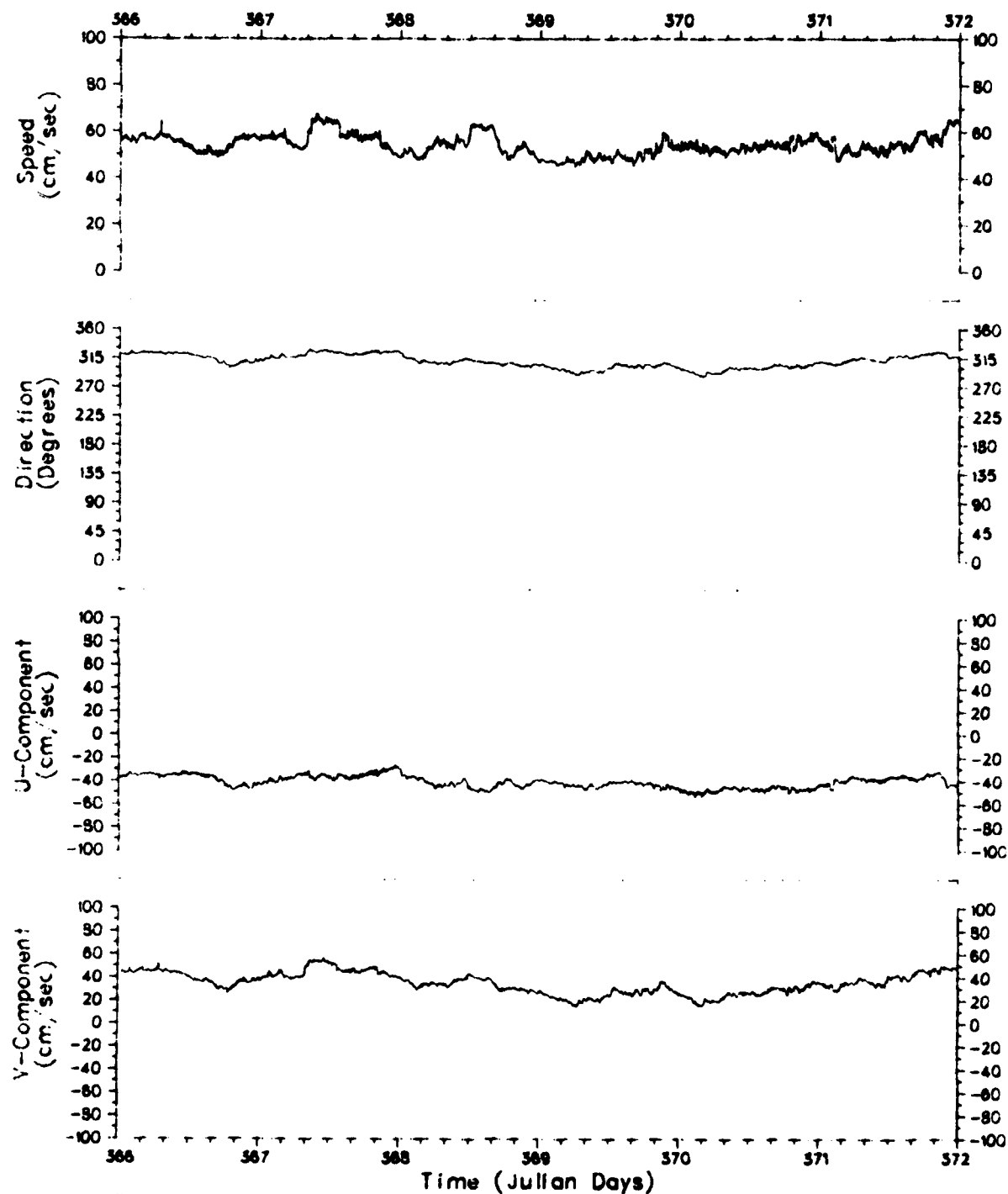
Figure 135.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

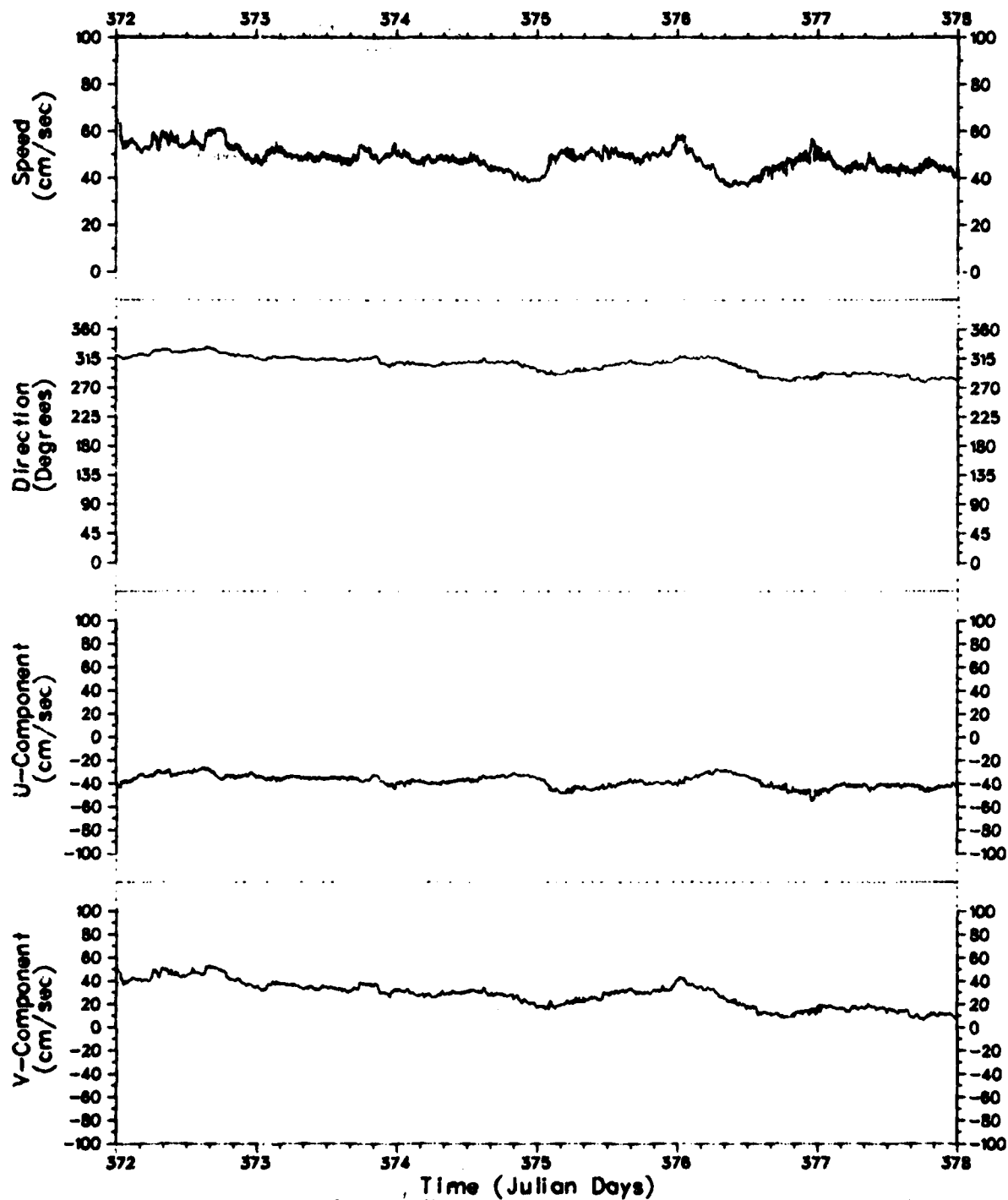
Array : ATOM79
 Depth : 000137
 Start : 19 12 1979
 End : 14 01 1980

Figure 136.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000137
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89 744165	End :	14 01 1980

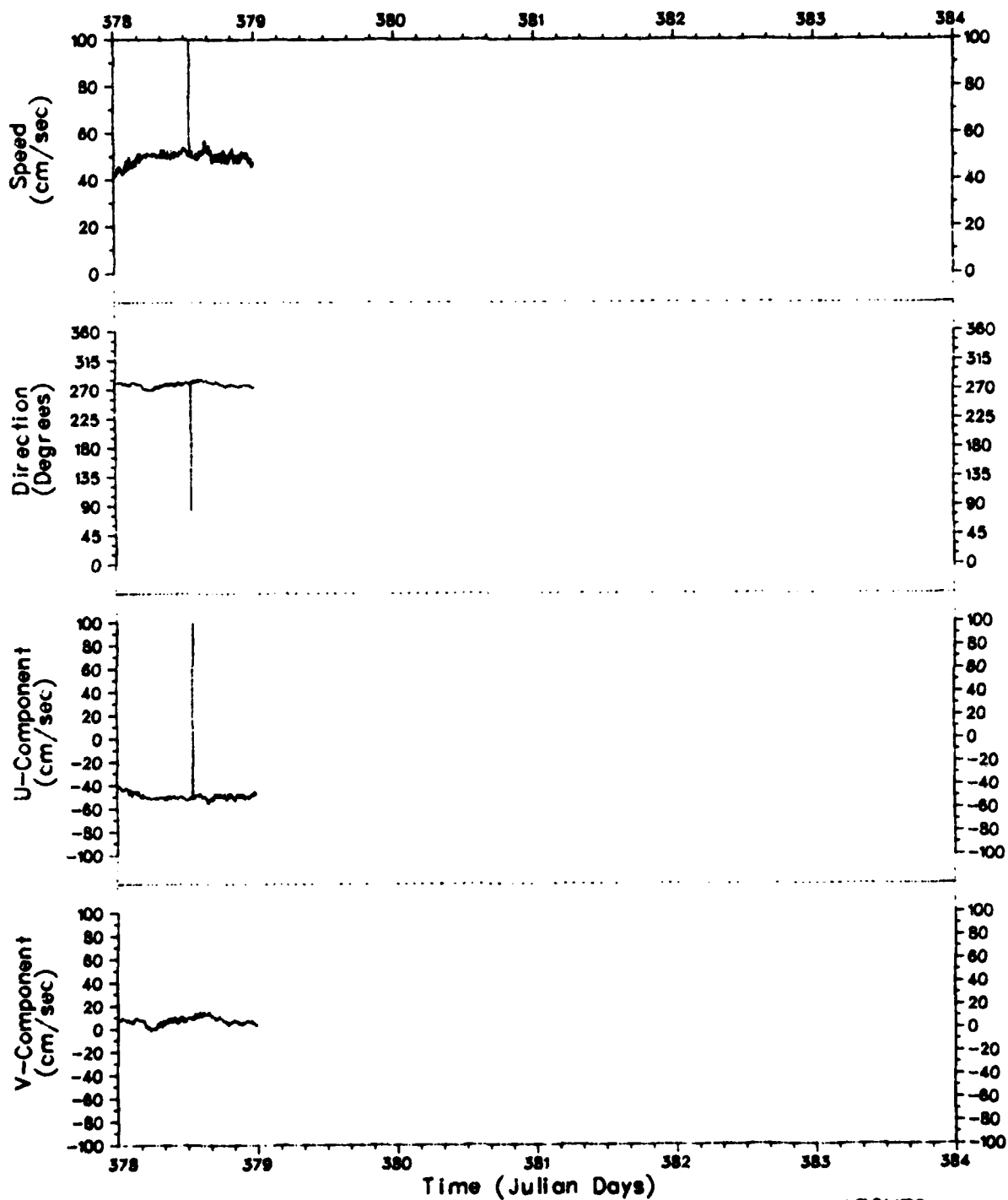
Figure 137.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

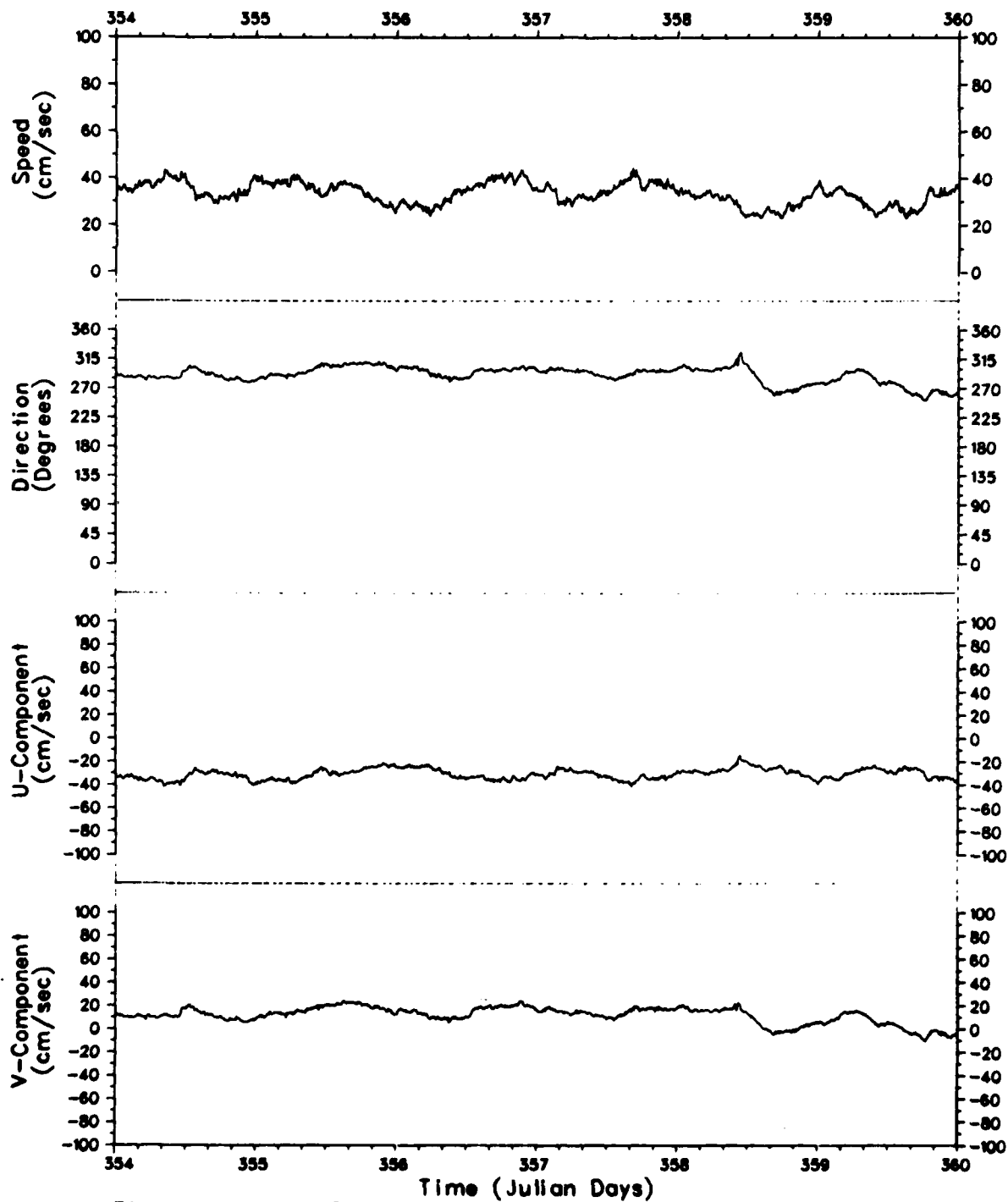
Array : ATOM79
 Depth : 000137
 Start : 19 12 1979
 End : 14 01 1980

Figure 138.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000137
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89 744165	End :	14 01 1980

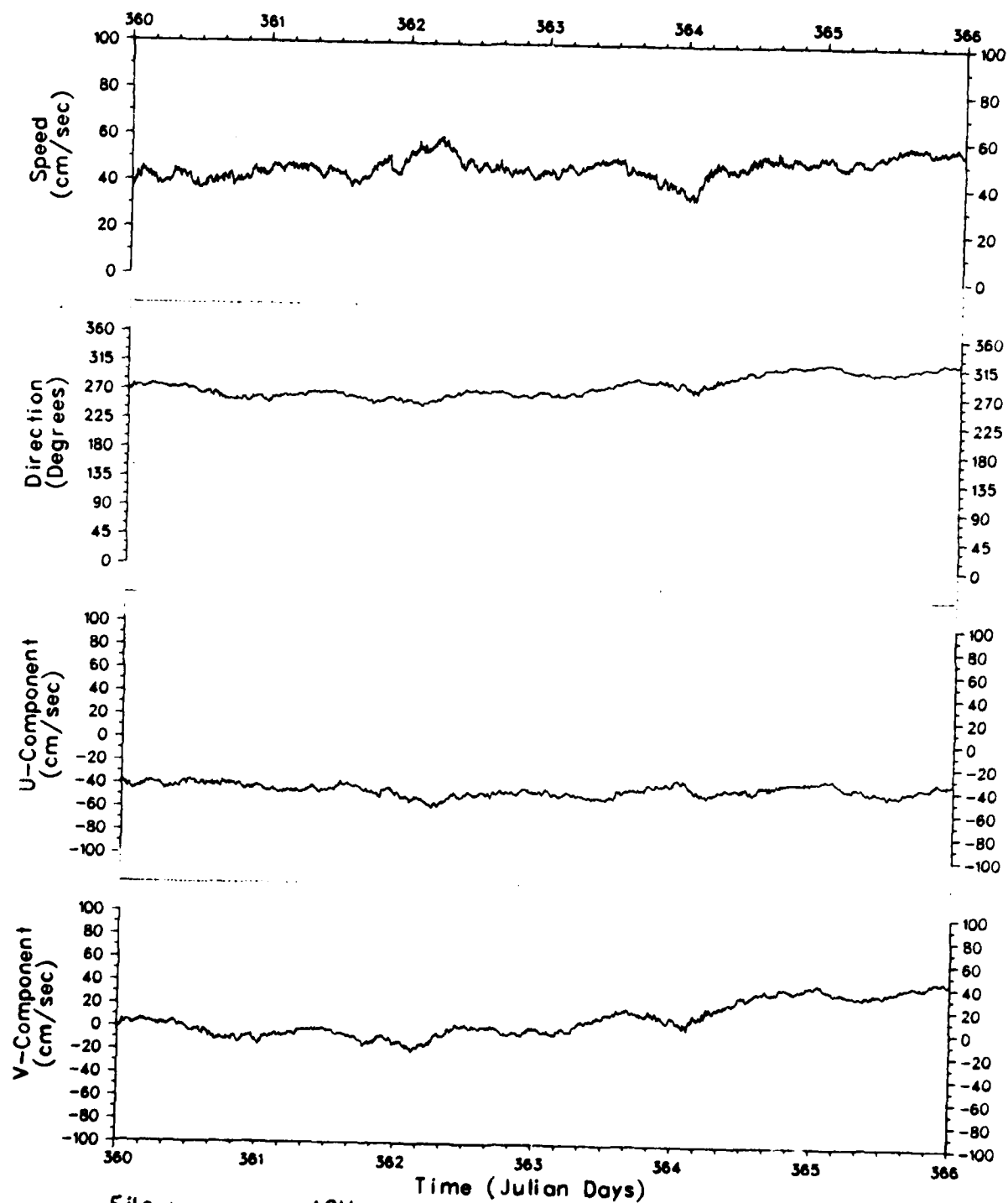
Figure 139.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

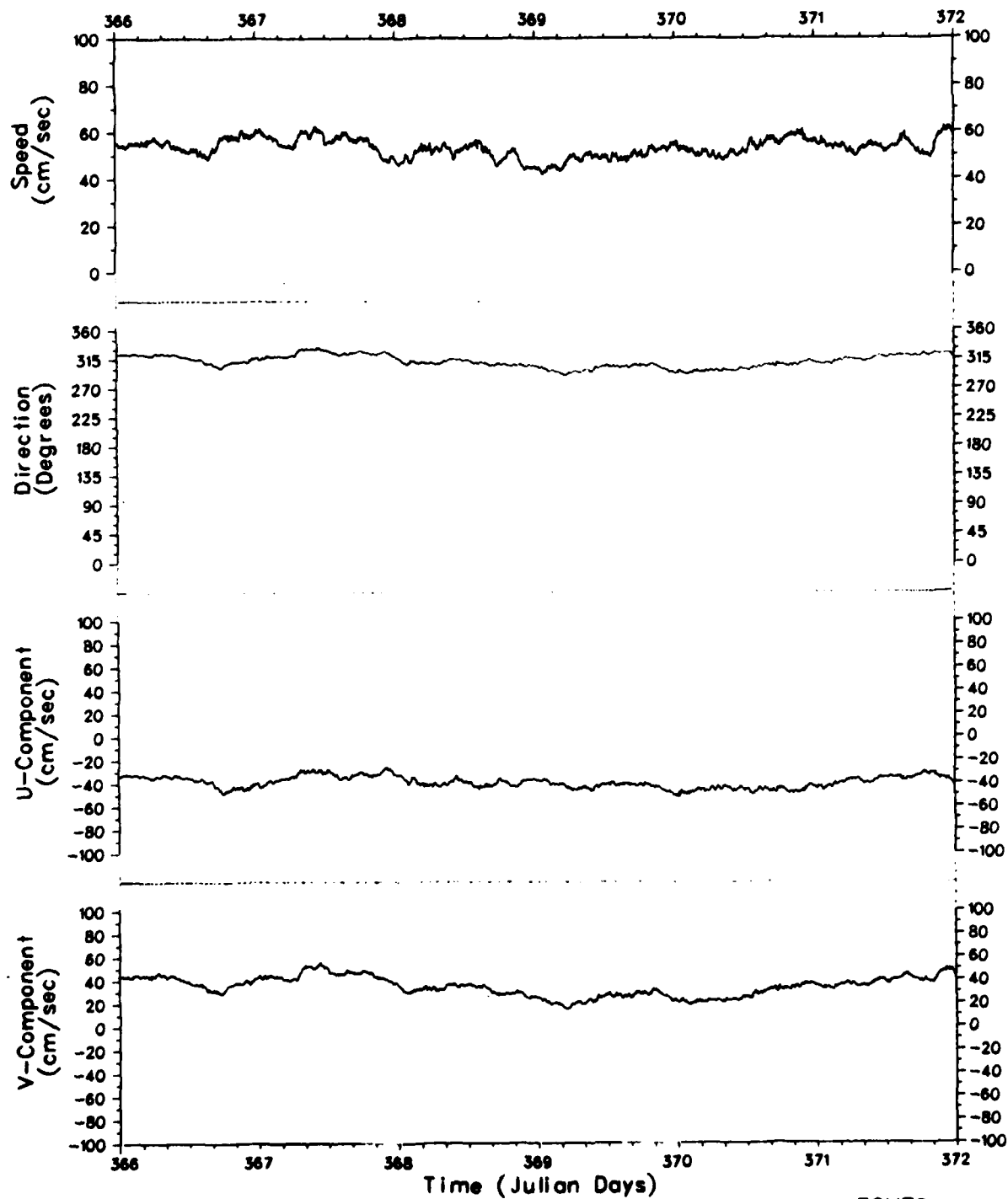
Array : ATOM79
 Depth : 000144
 Start : 19 12 1979
 End : 14 01 1980

Figure 140.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000144
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89.744165	End :	14 01 1980

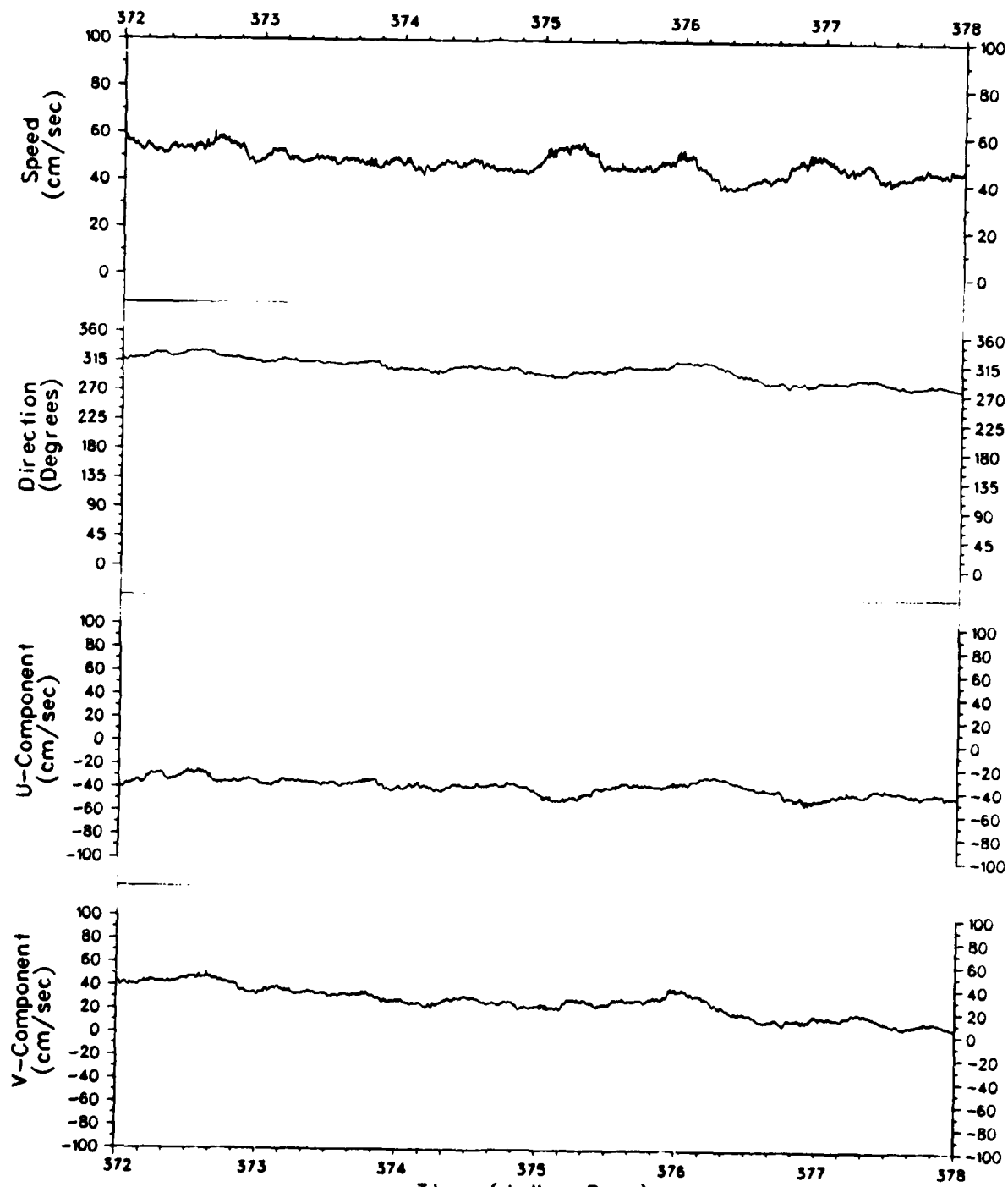
Figure 141.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000144
 Start : 19 12 1979
 End : 14 01 1980

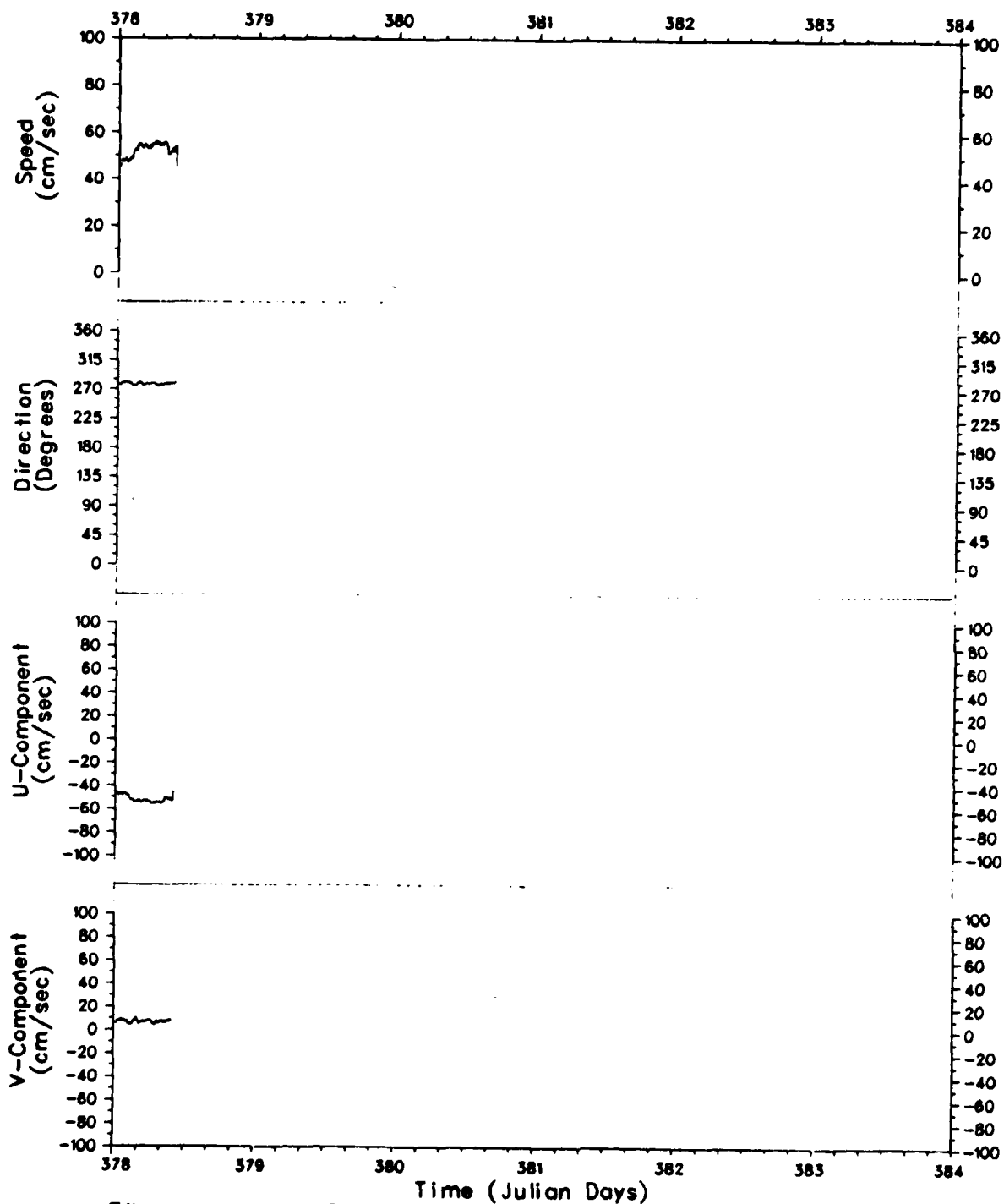
Figure 142.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000144
 Start : 19 12 1979
 End : 14 01 1980

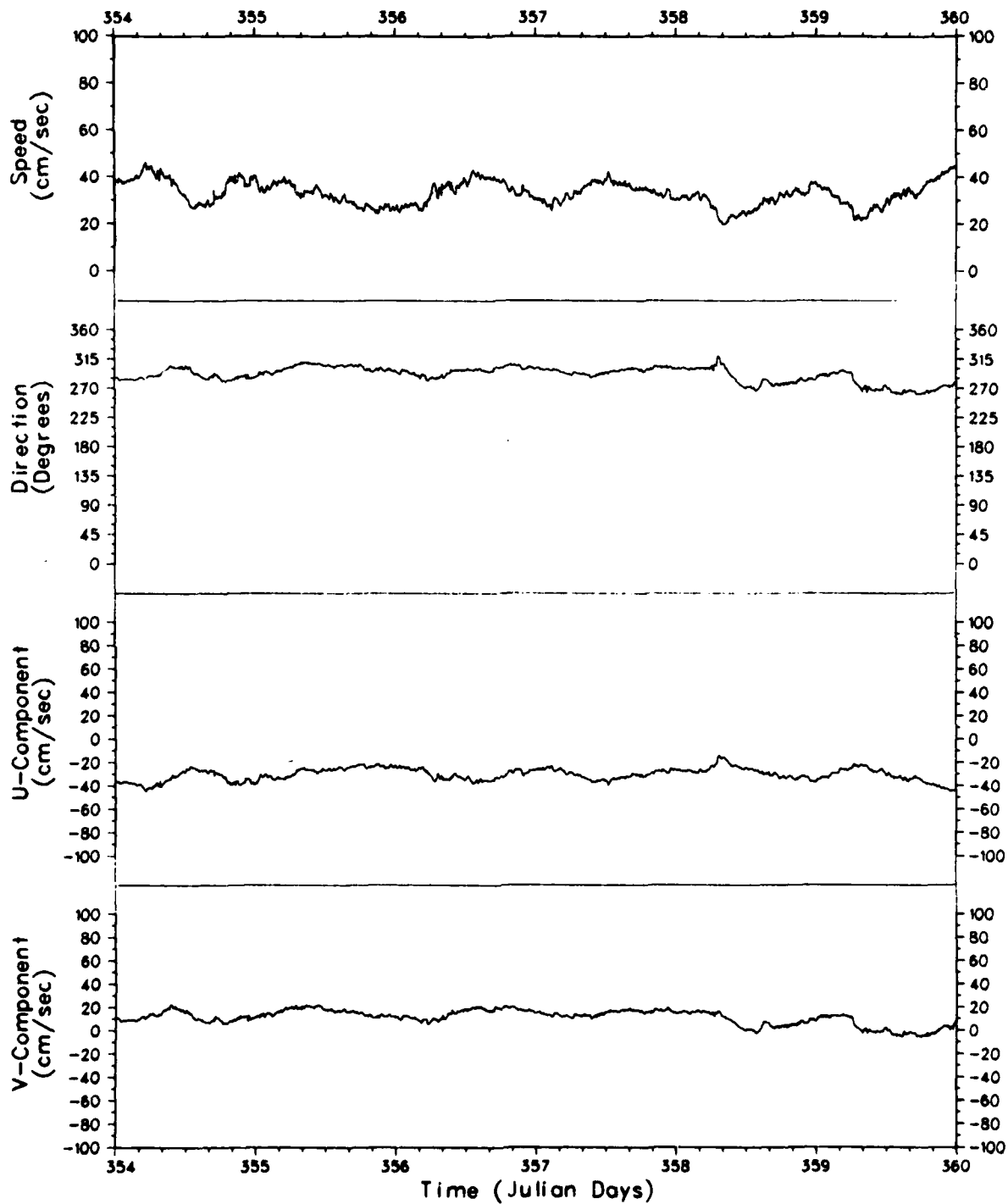
Figure 143,



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000144
 Start : 19 12 1979
 End : 14 01 1980

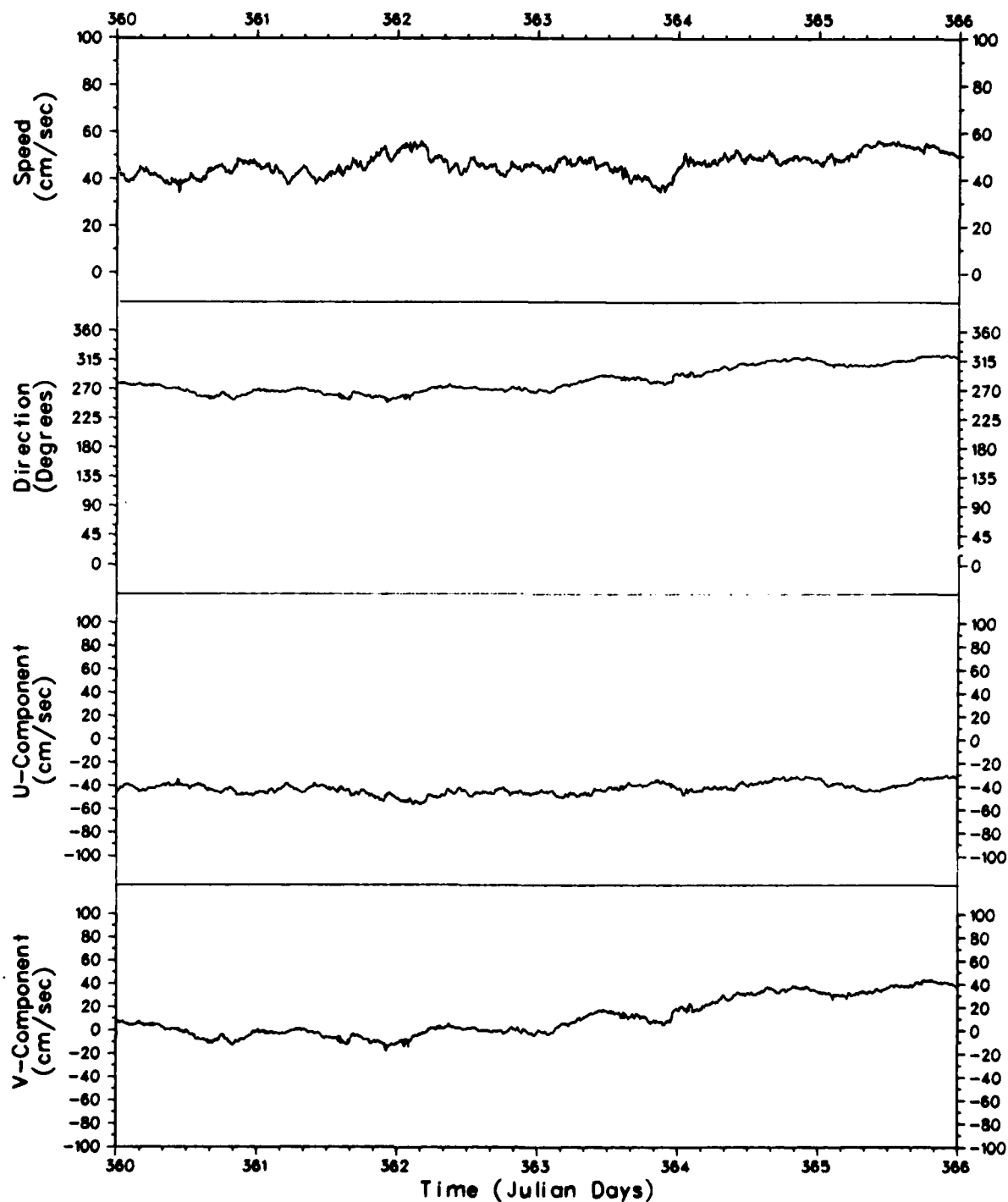
Figure 144.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000151
 Start : 19 12 1979
 End : 14 01 1980

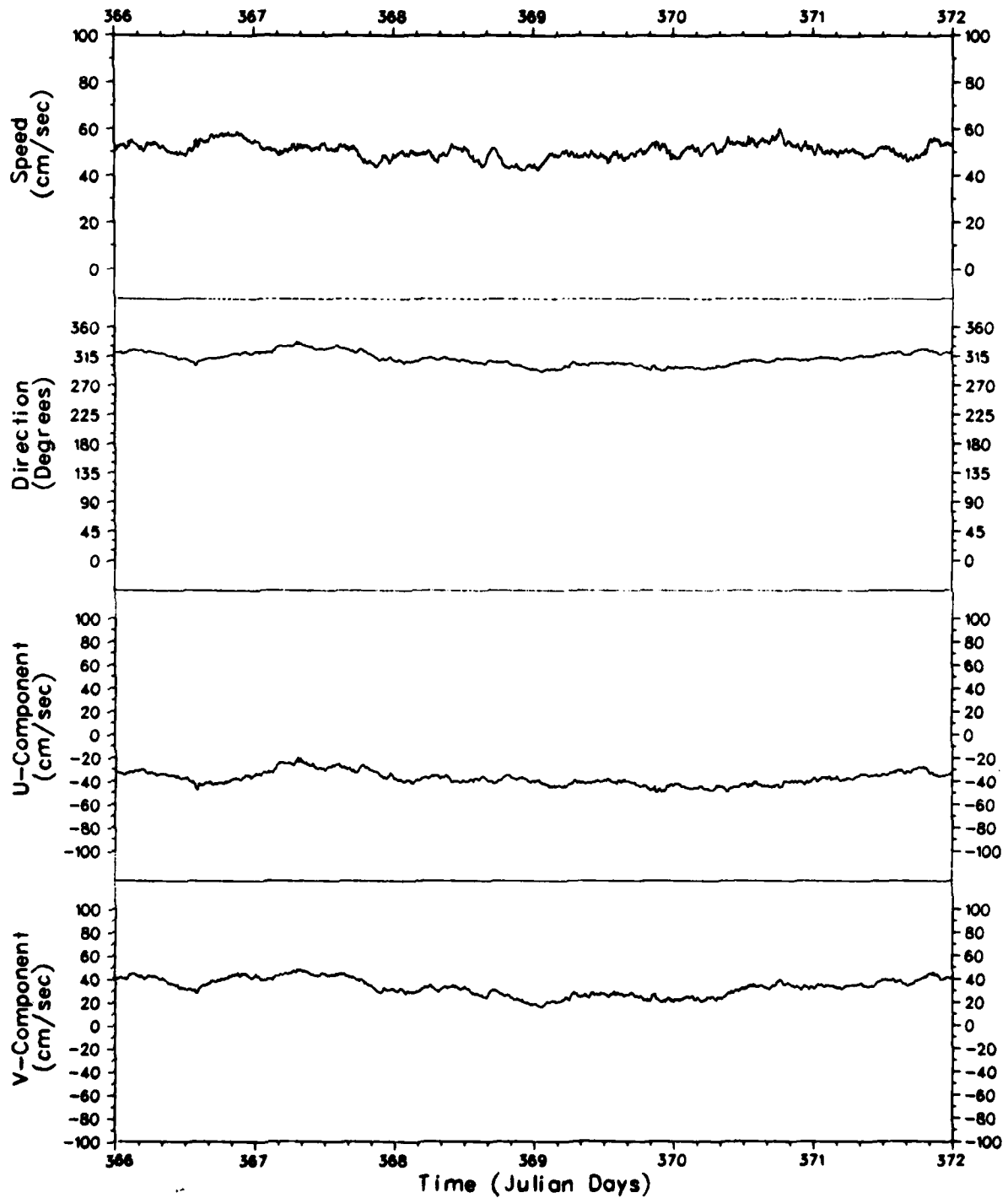
Figure 145.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

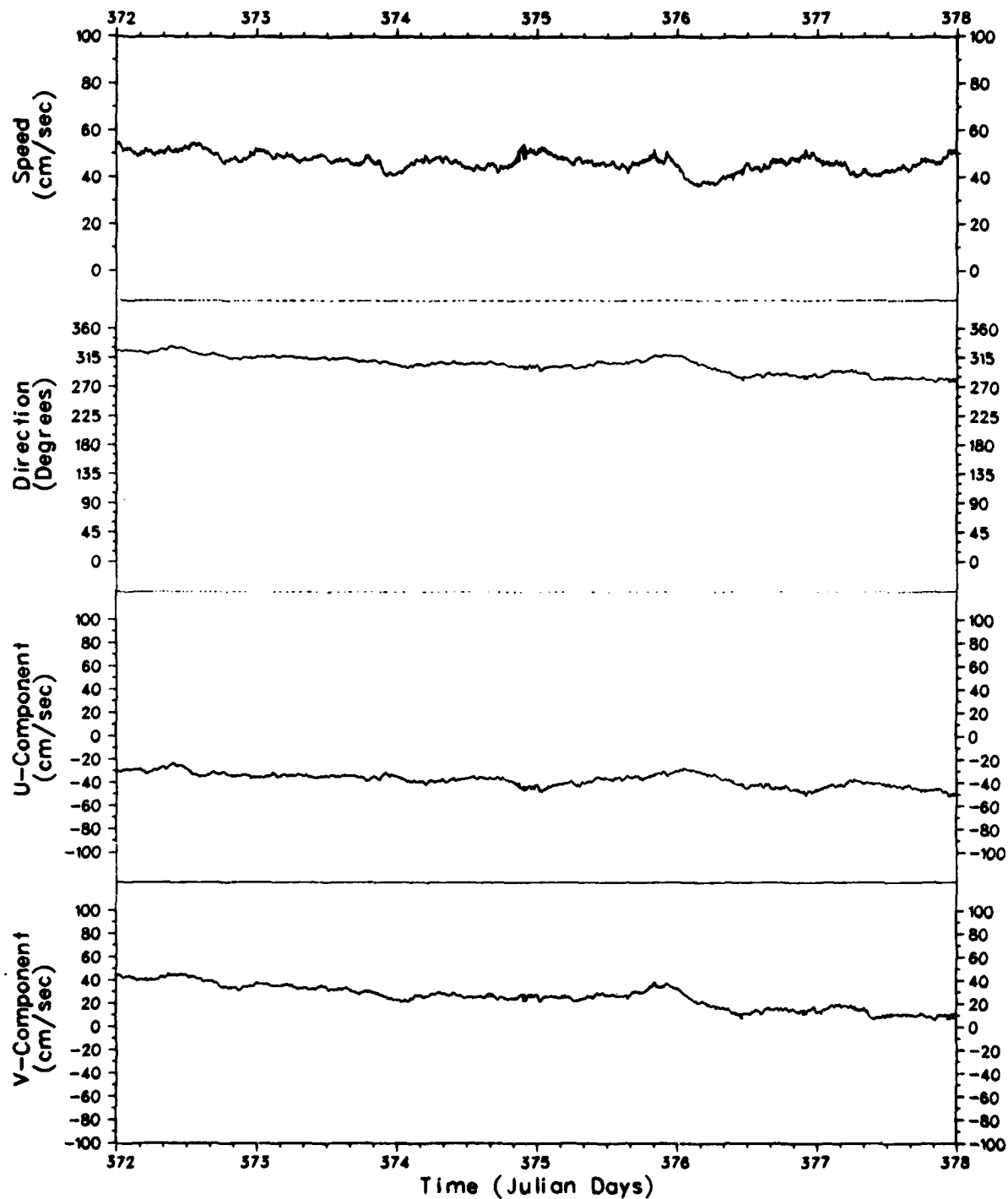
Array : ATOM79
 Depth : 000151
 Start : 19 12 1979
 End : 14 01 1980

Figure 146.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000151
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89.744165	End :	14 01 1980

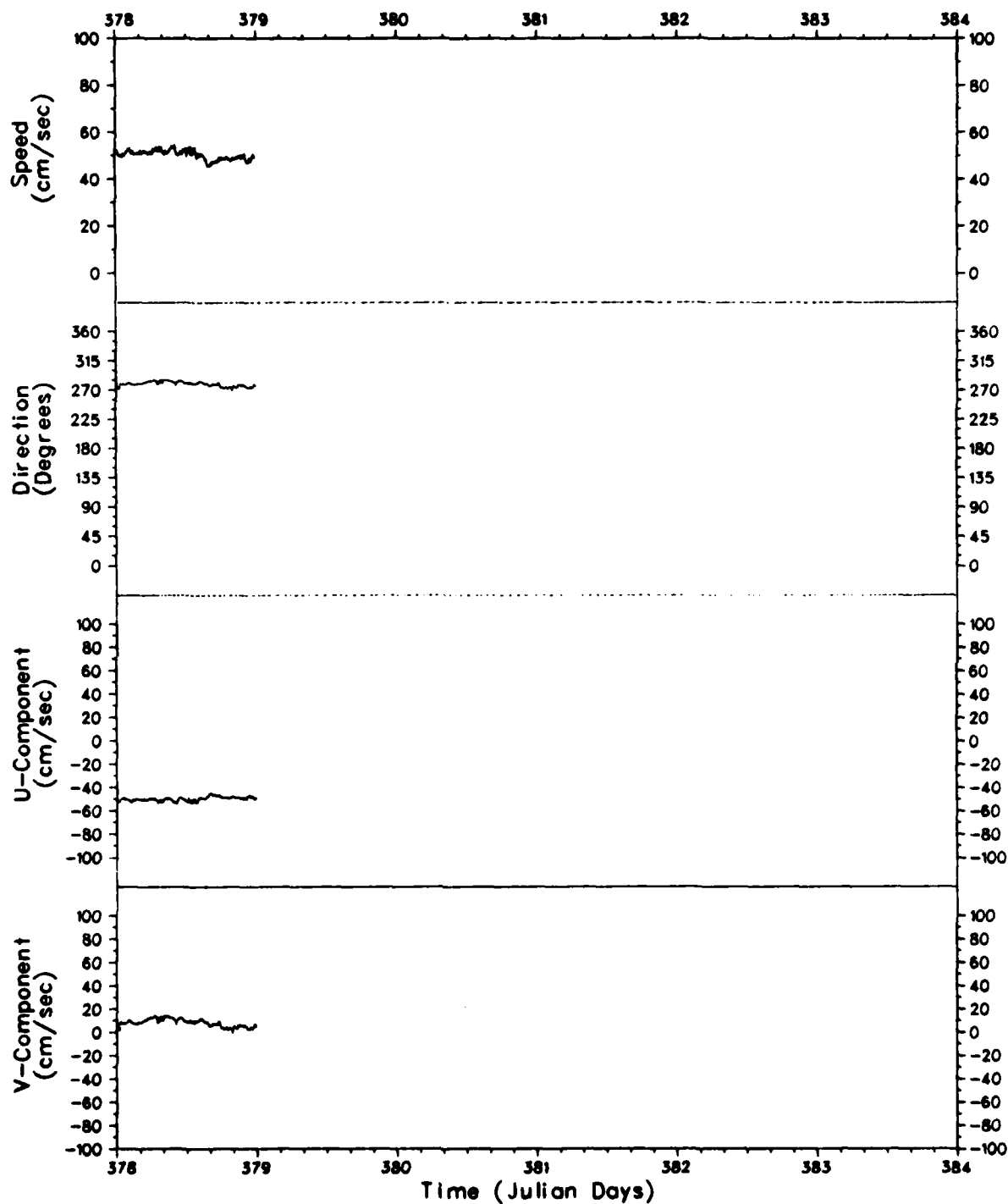
Figure 147,



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000151
 Start : 19 12 1979
 End : 14 01 1980

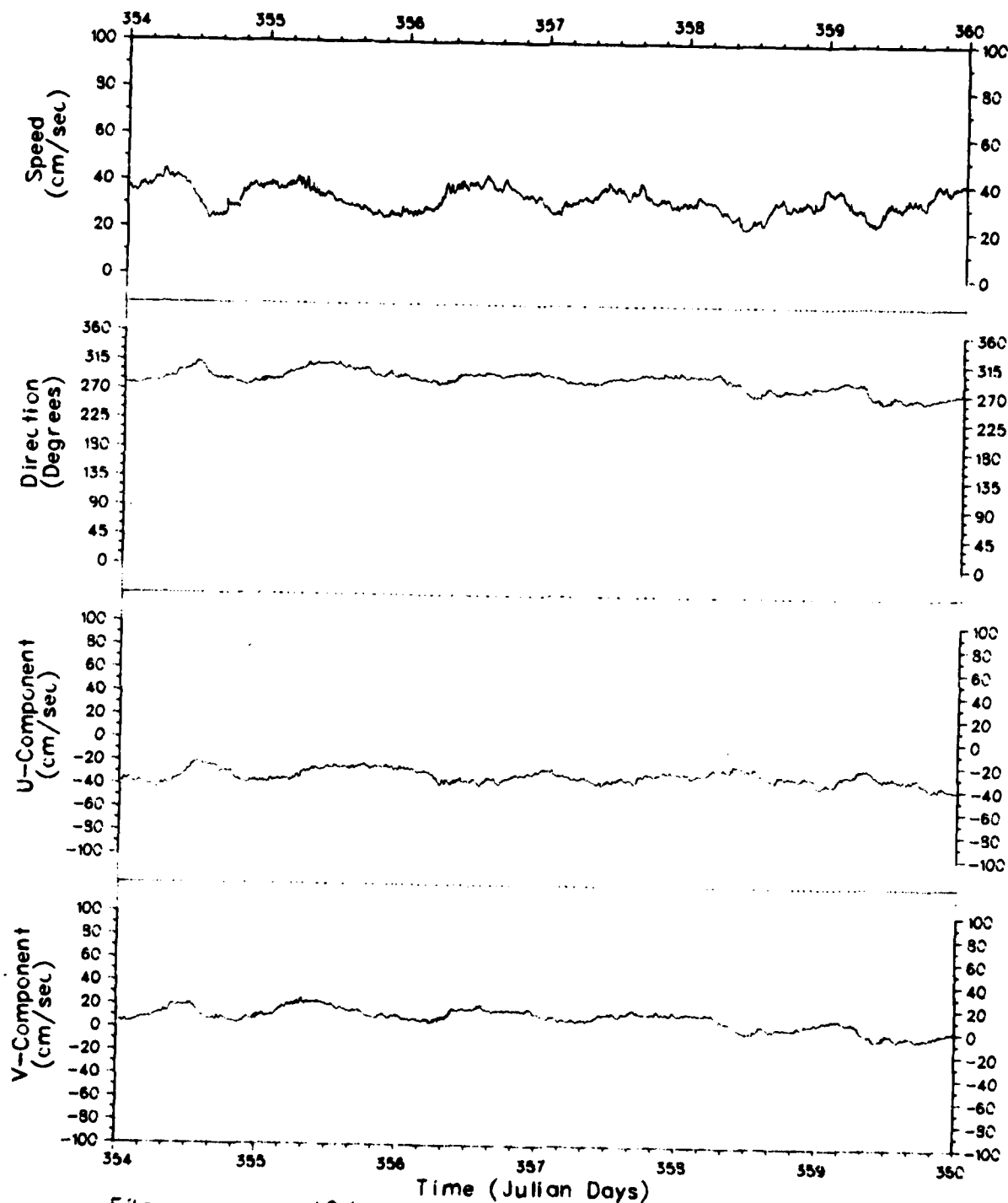
Figure 148.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

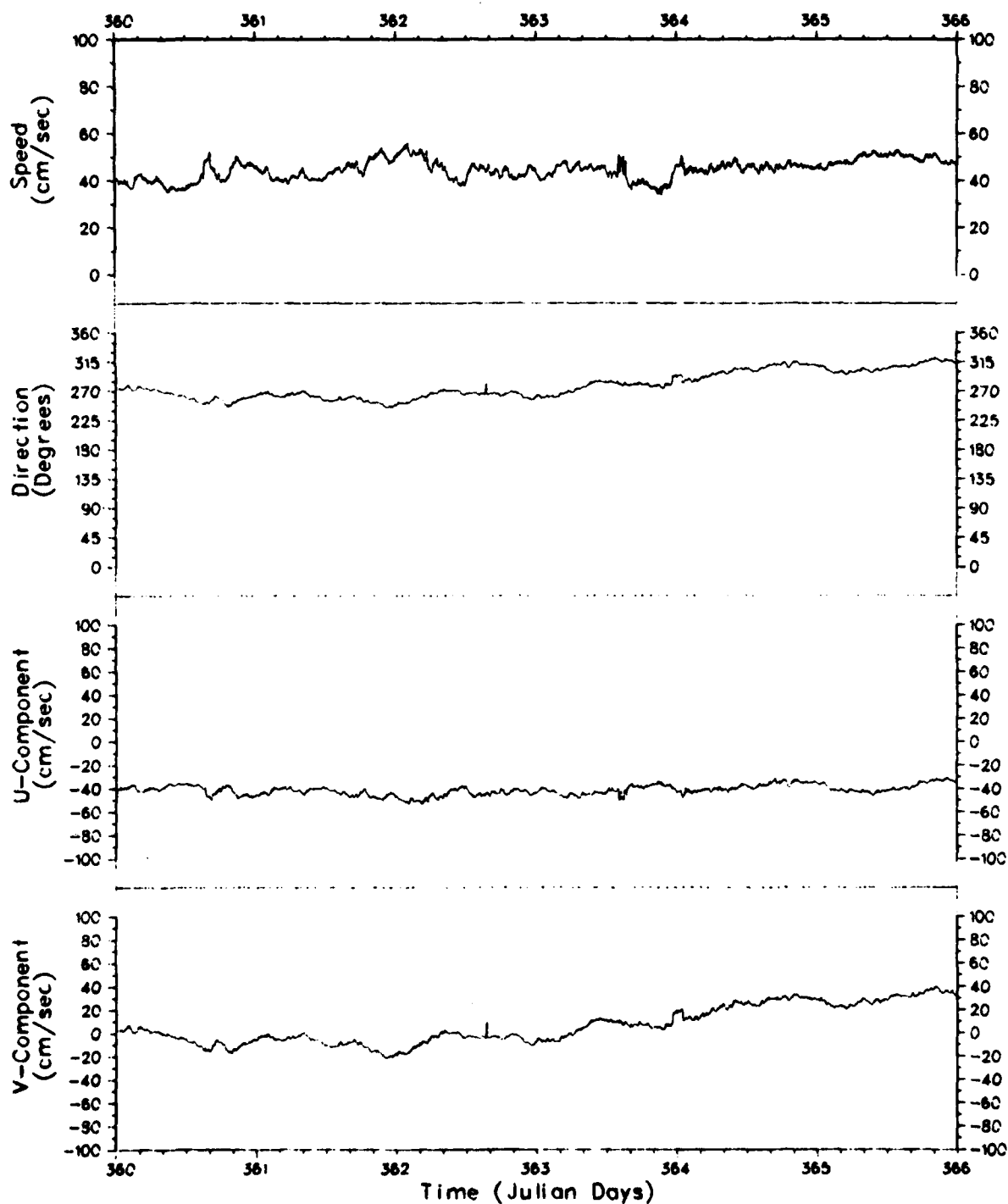
Array : ATOM79
 Depth : 000151
 Start : 19 12 1979
 End : 14 01 1980

Figure 149.



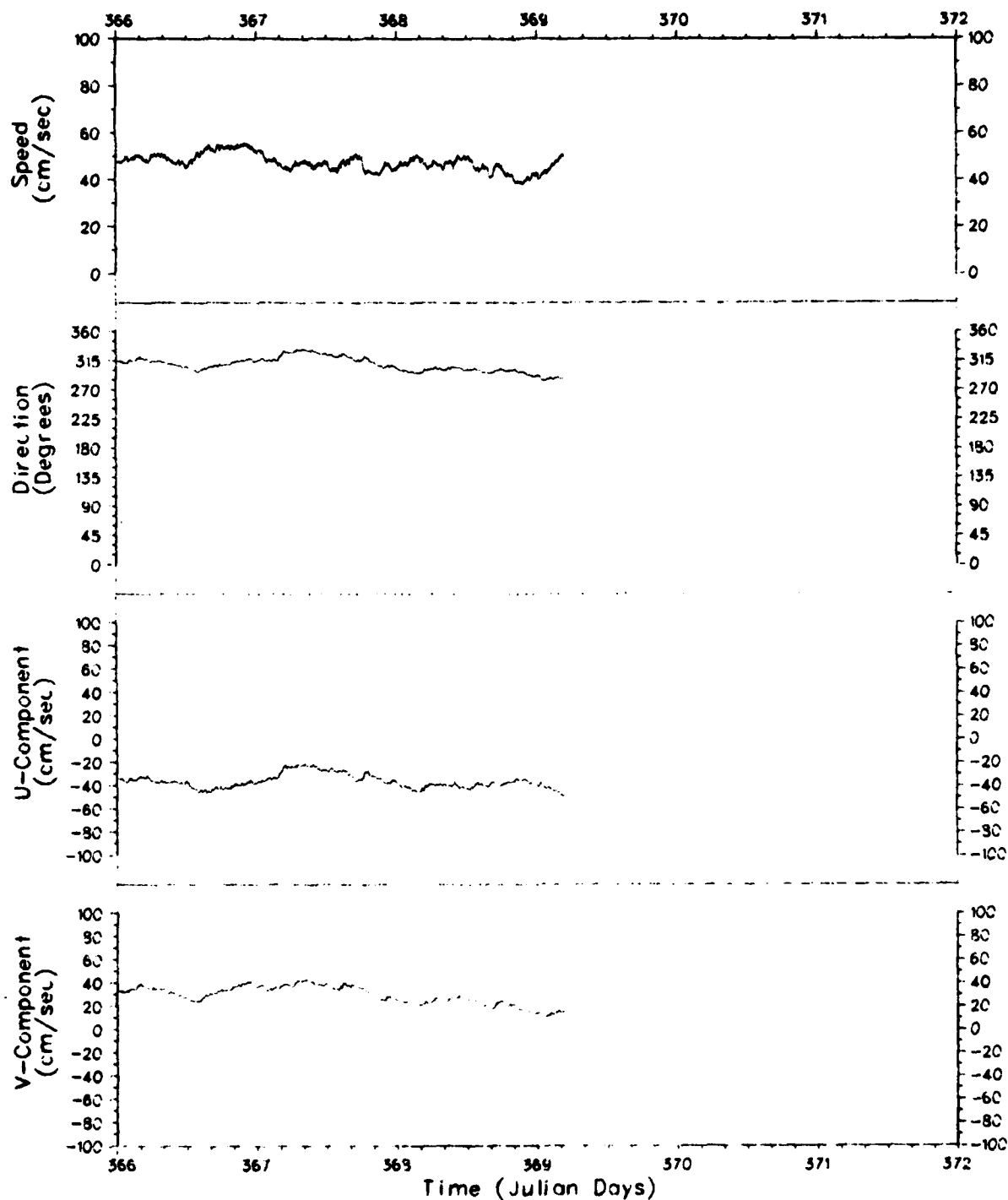
File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000158
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89 744165	End :	14 01 1980

Figure 150.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000158
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89 744165	End :	14 01 1980

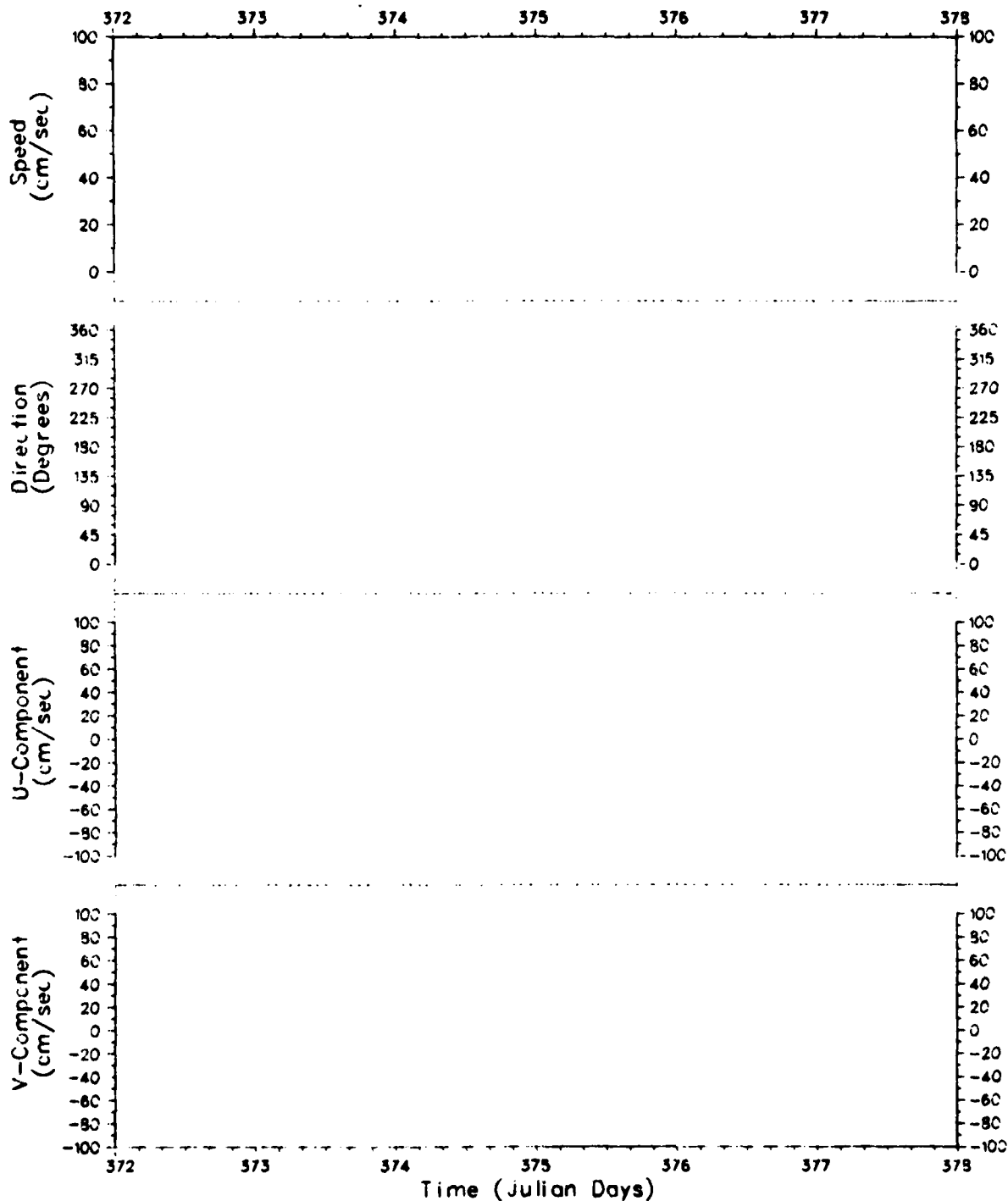
Figure 151.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

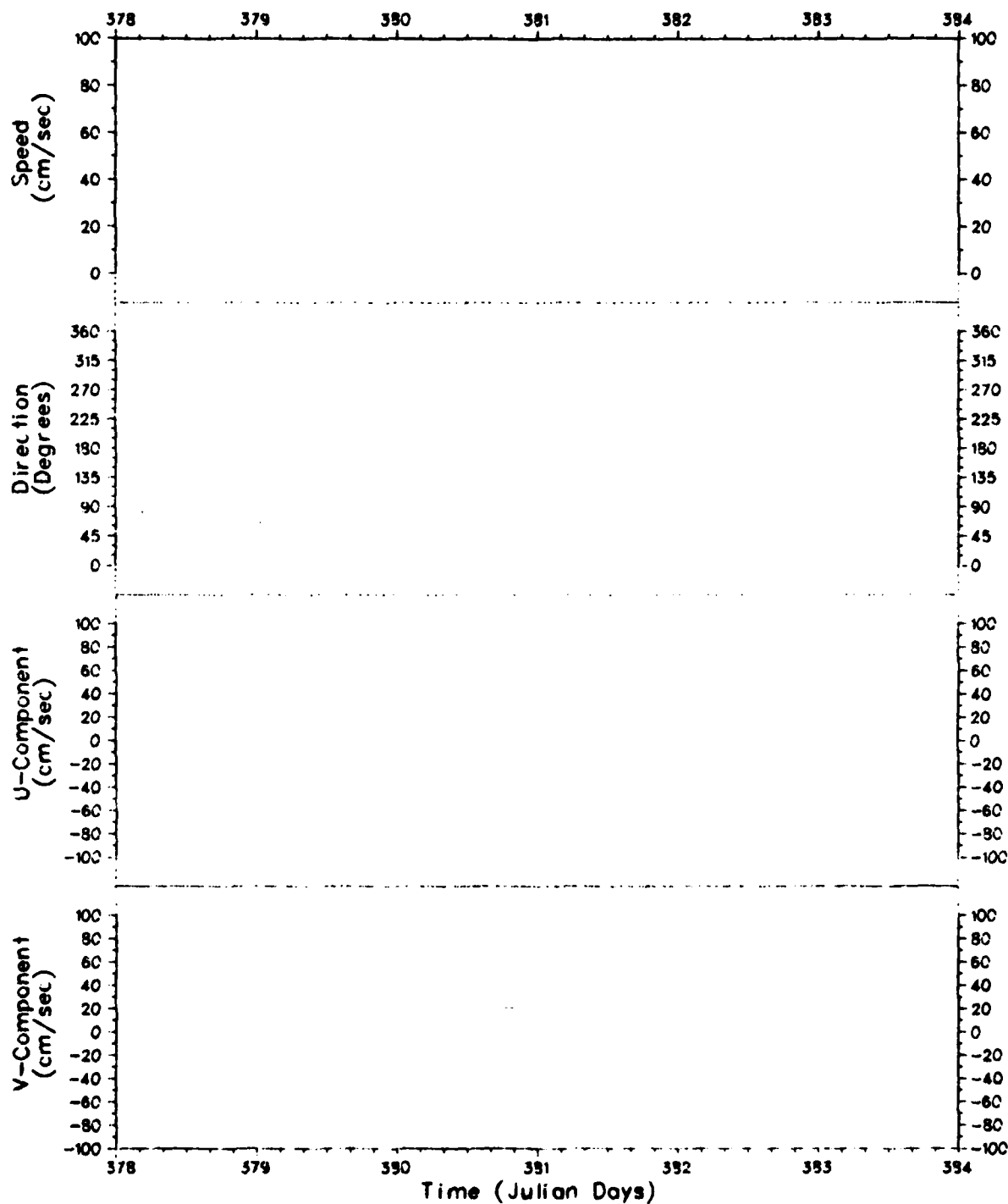
Array ATOM79
 Depth 000158
 Start 19 12 1979
 End 14 01 1980

Figure 152.



File	ACM	Array	ATOM79
Meter	790100	Depth	000158
Latitude	25 805555	Start	19 12 1979
Longitude	-89 744165	End	14 01 1980

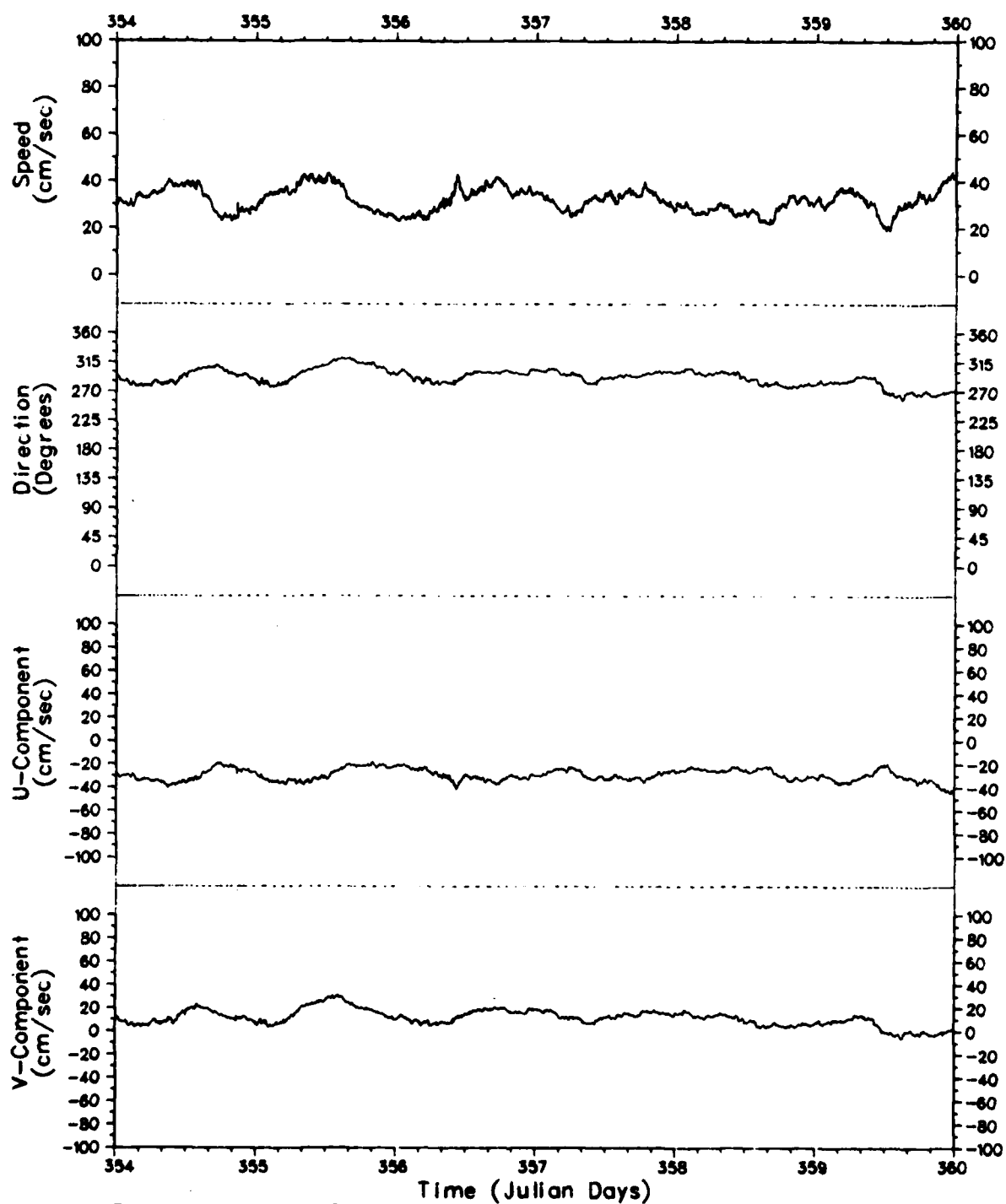
Figure 153.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000158
 Start : 19 12 1979
 End : 14 01 1980

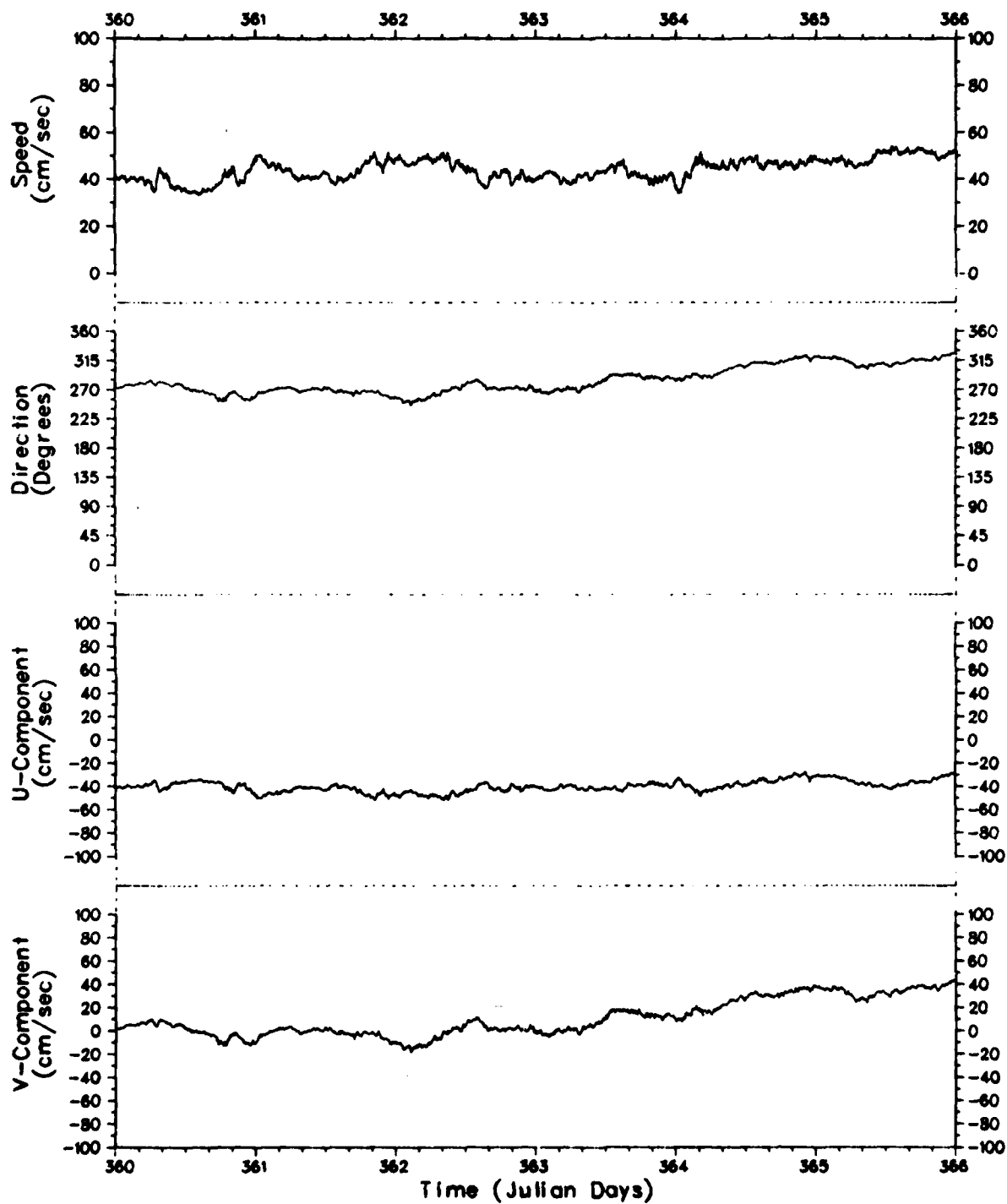
Figure 154.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000165
 Start : 19 12 1979
 End : 14 01 1980

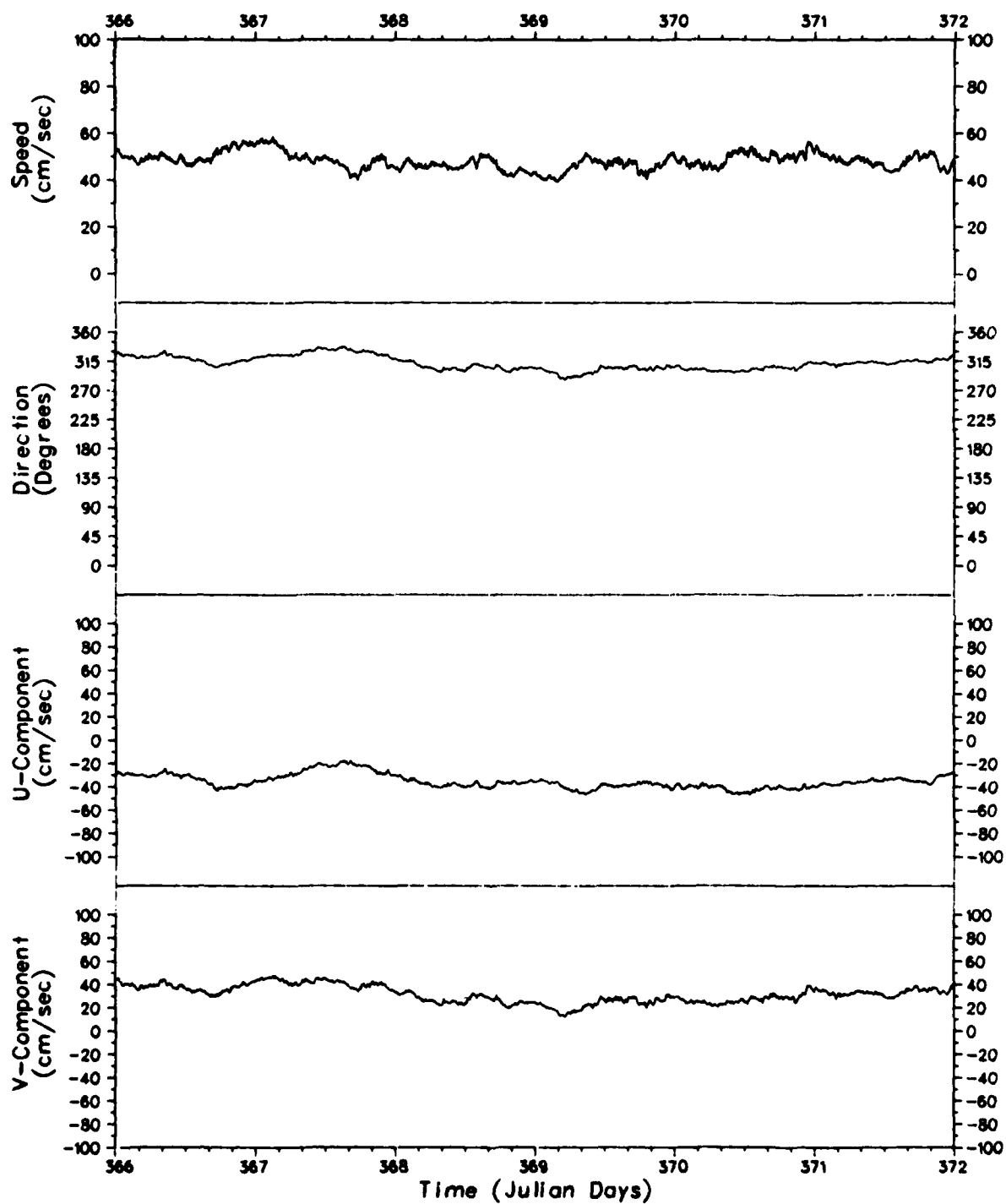
Figure 155.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

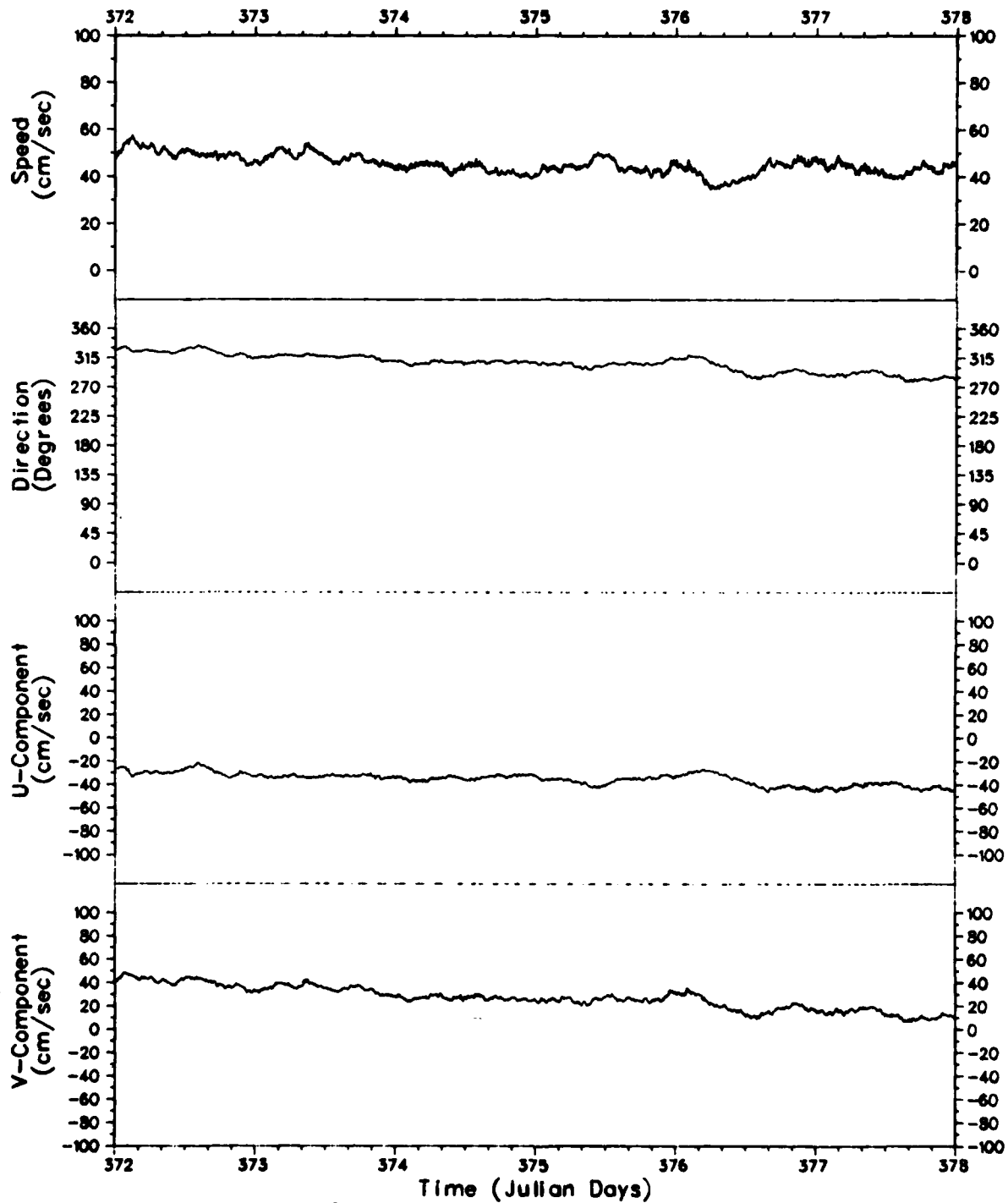
Array : ATOM79
 Depth : 000165
 Start : 19 12 1979
 End : 14 01 1980

Figure 156.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000165
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89.744165	End :	14 01 1980

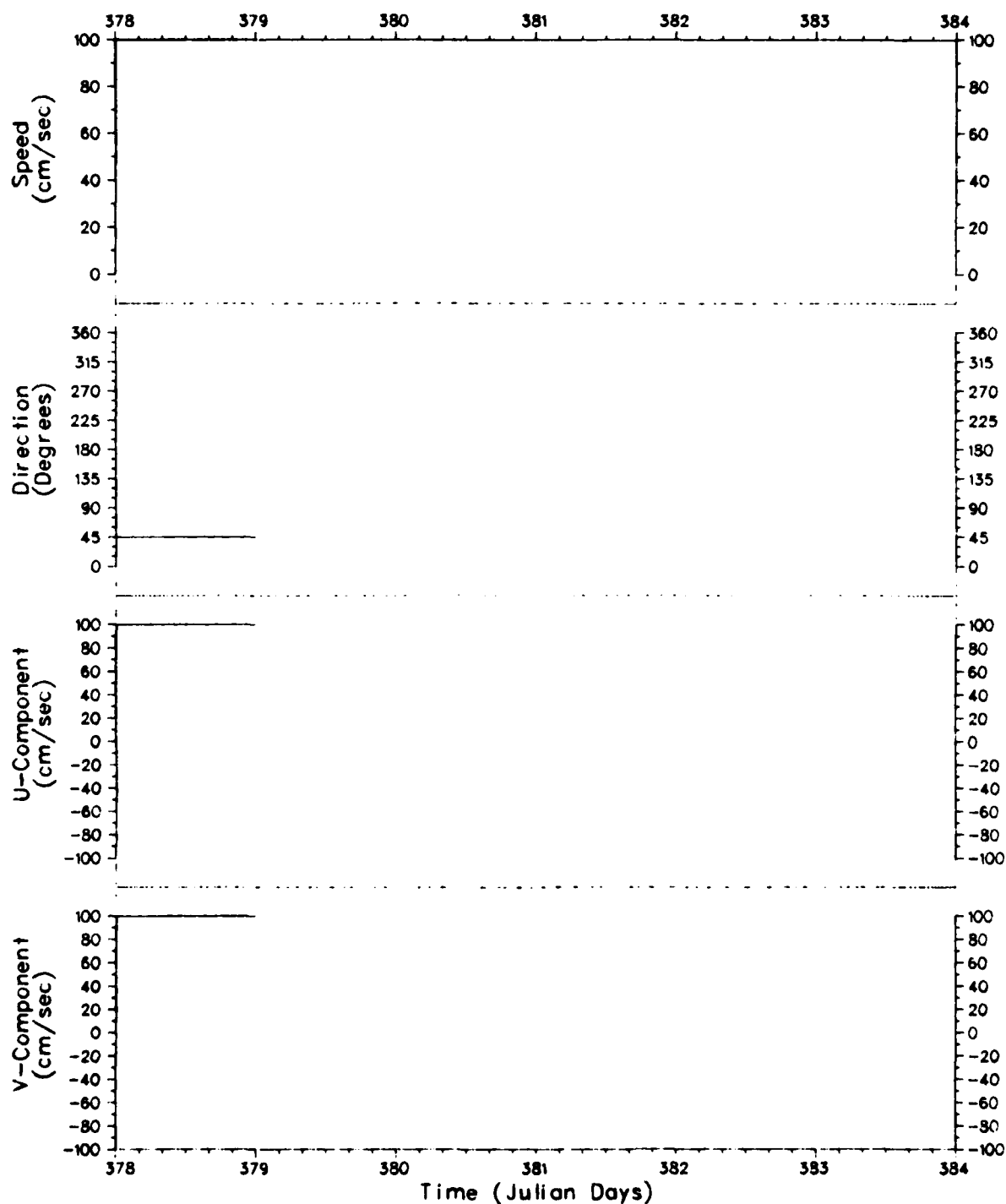
Figure 157.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000165
 Start : 19 12 1979
 End : 14 01 1980

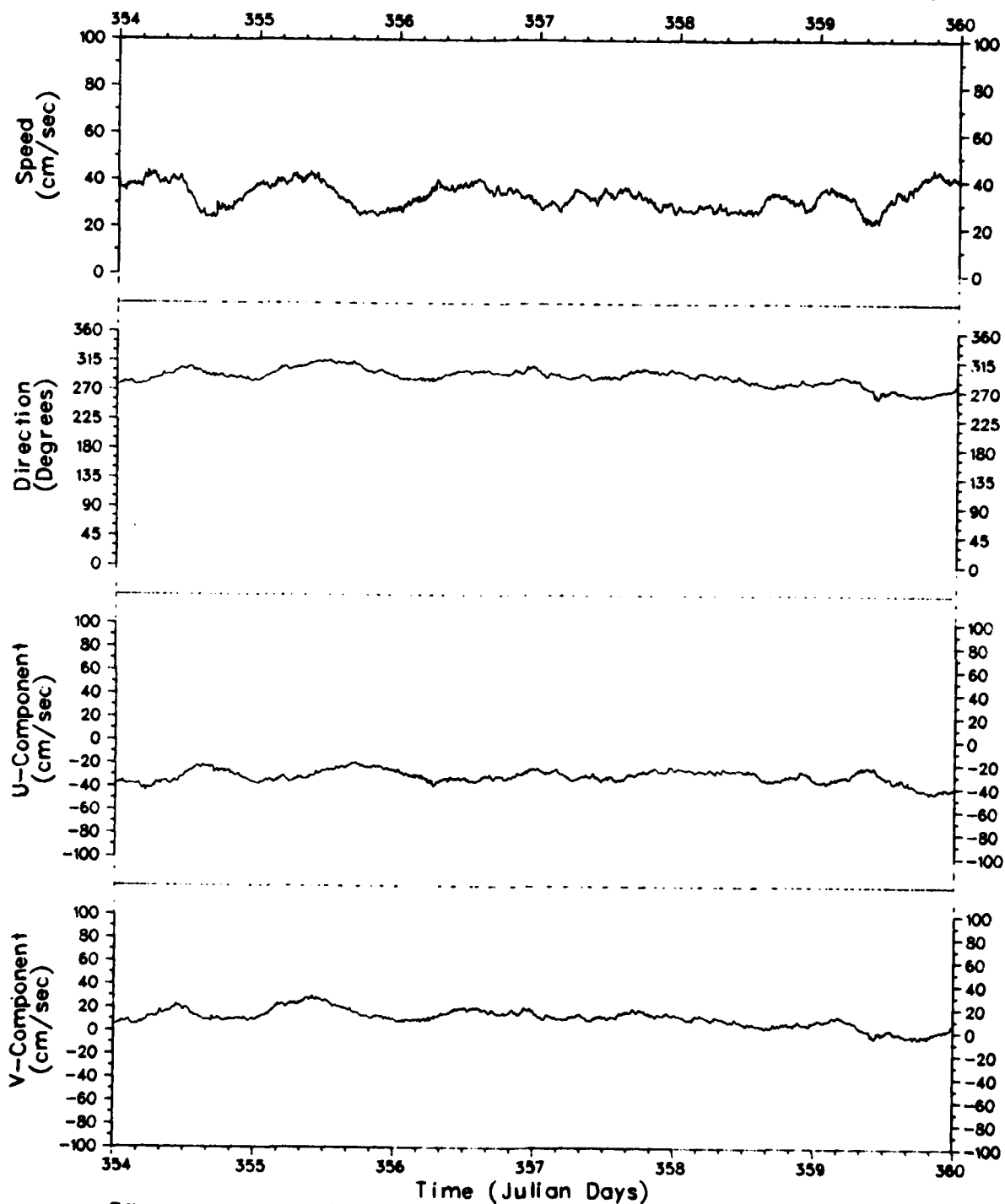
Figure 158.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000165
 Start : 19 12 1979
 End : 14 01 1980

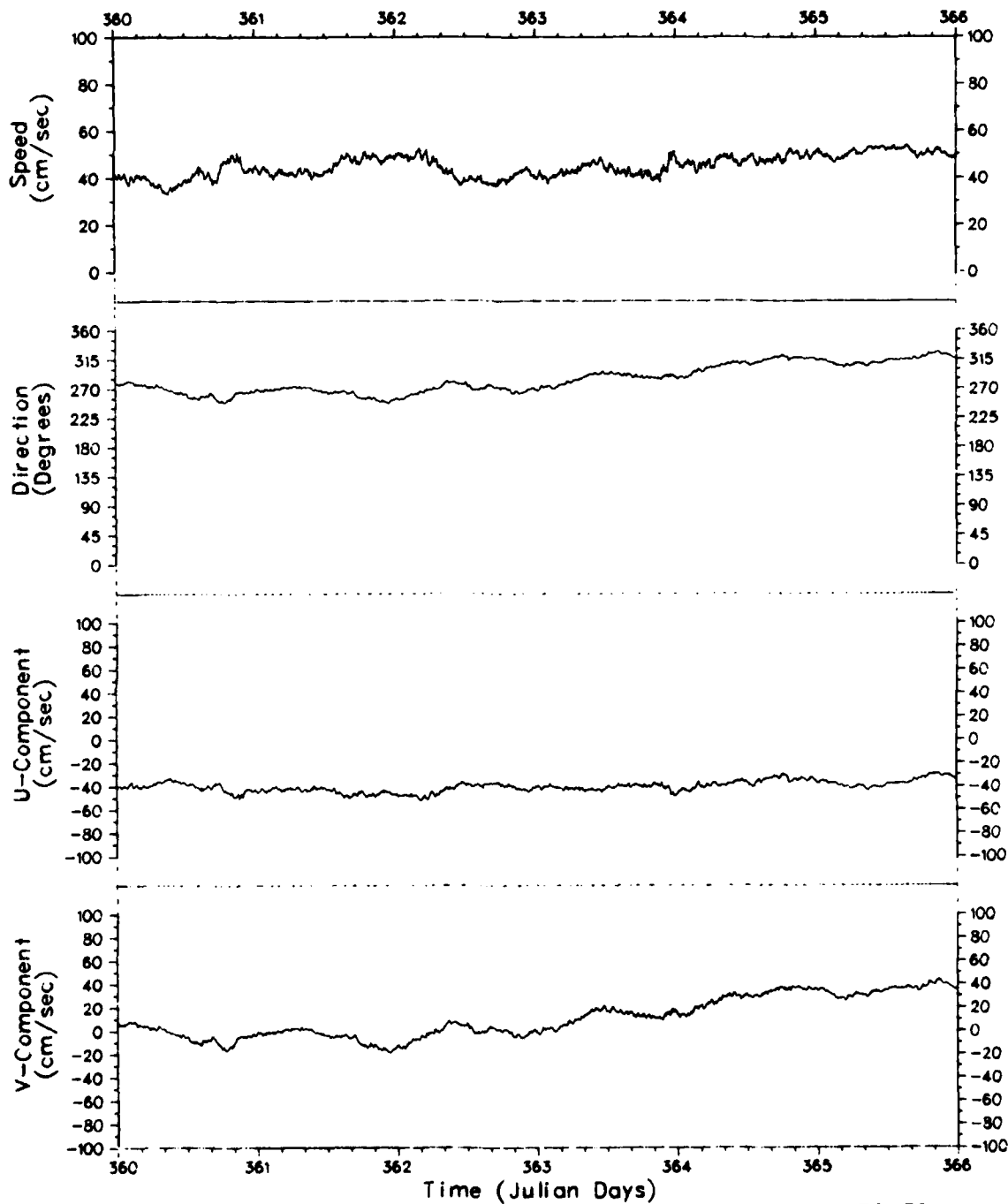
Figure 159.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

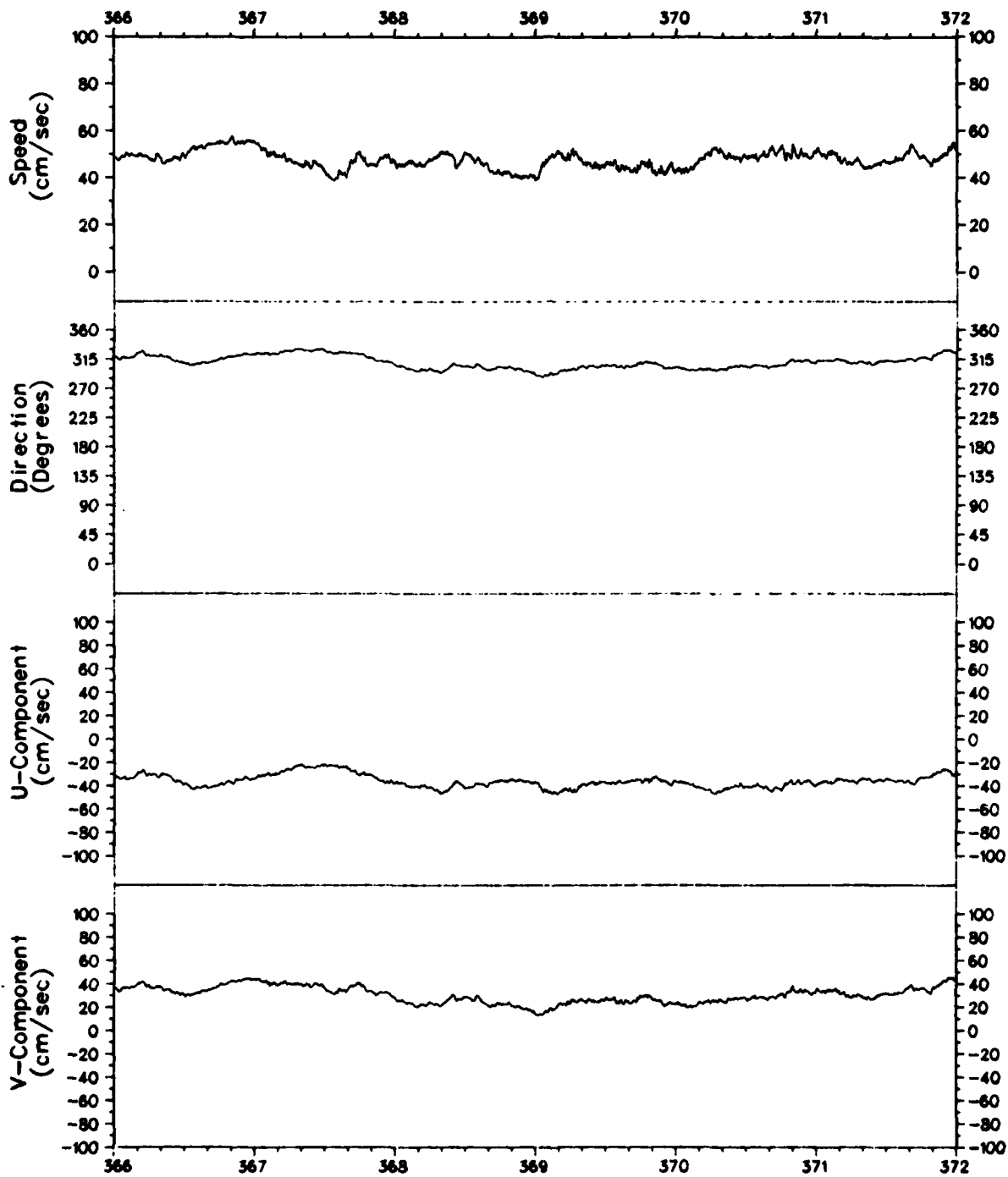
Array : ATOM79
 Depth : 000172
 Start : 00 12 1979
 End : 14 01 1980

Figure 160.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000172
Latitude :	25.805555	Start :	00 12 1979
Longitude :	-89.744165	End :	14 01 1980

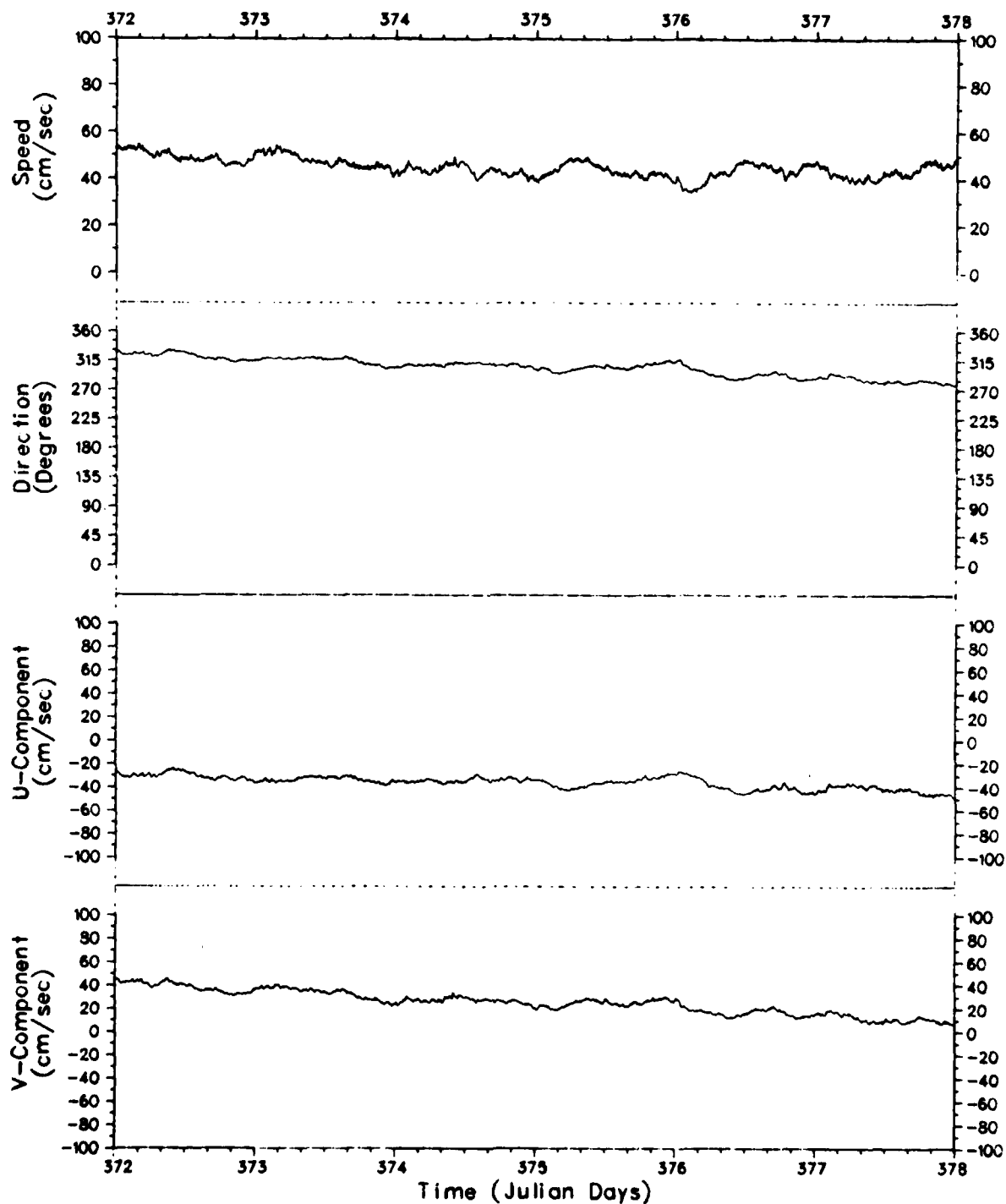
Figure 161.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000172
 Start : 00 12 1979
 End : 14 01 1980

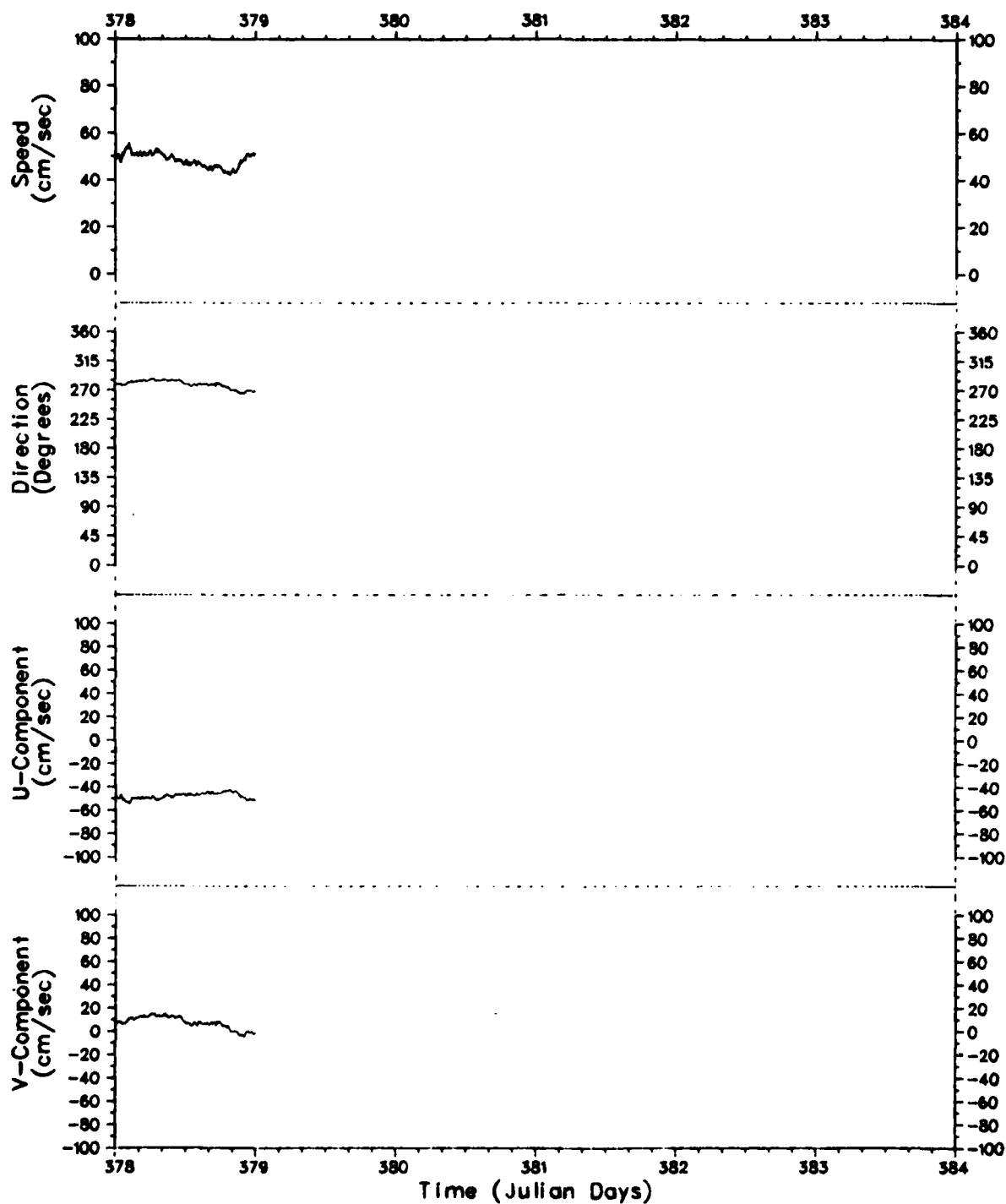
Figure 162.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000172
 Start : 00 12 1979
 End : 14 01 1980

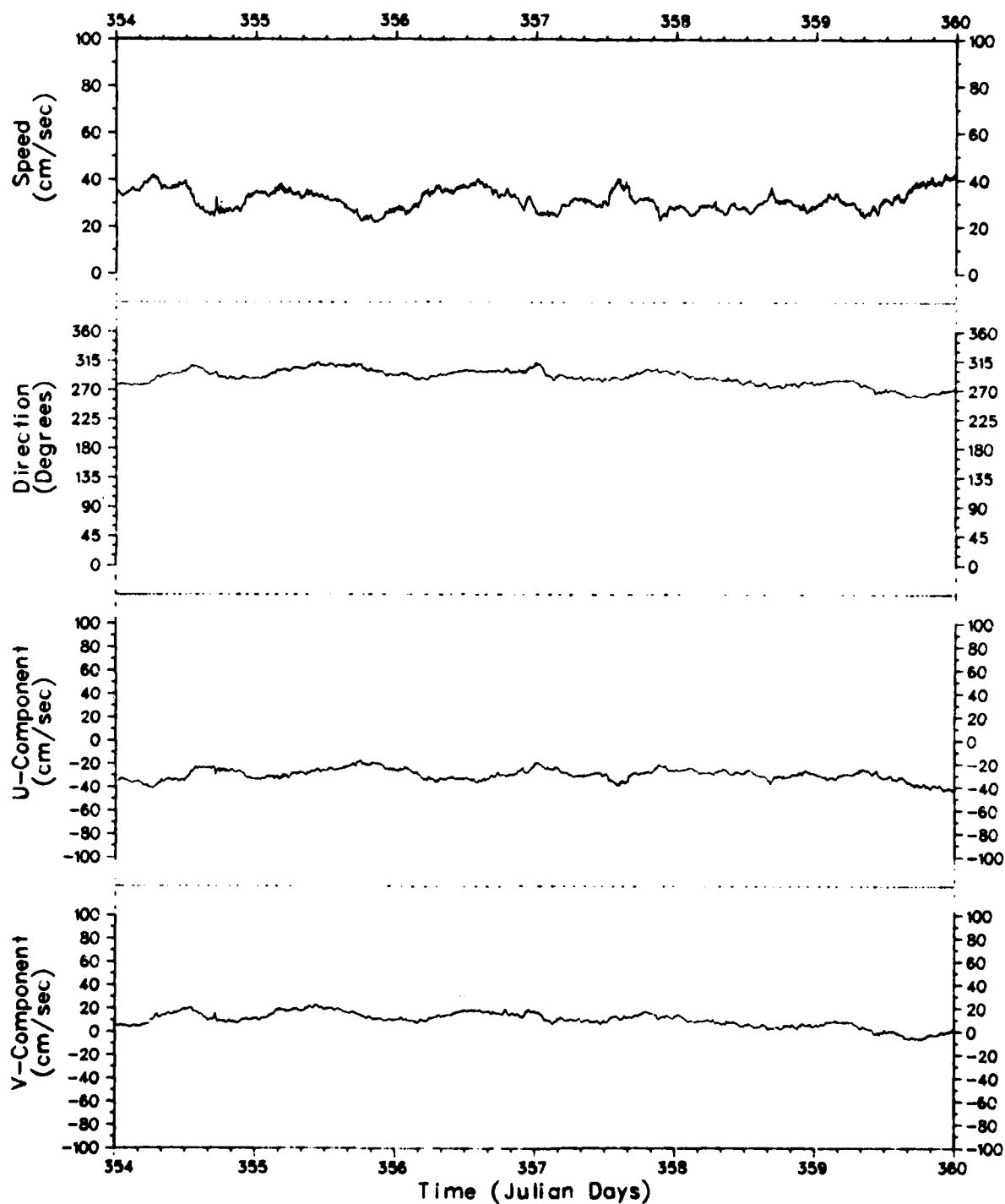
Figure 163.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000172
 Start : 00 12 1979
 End : 14 01 1980

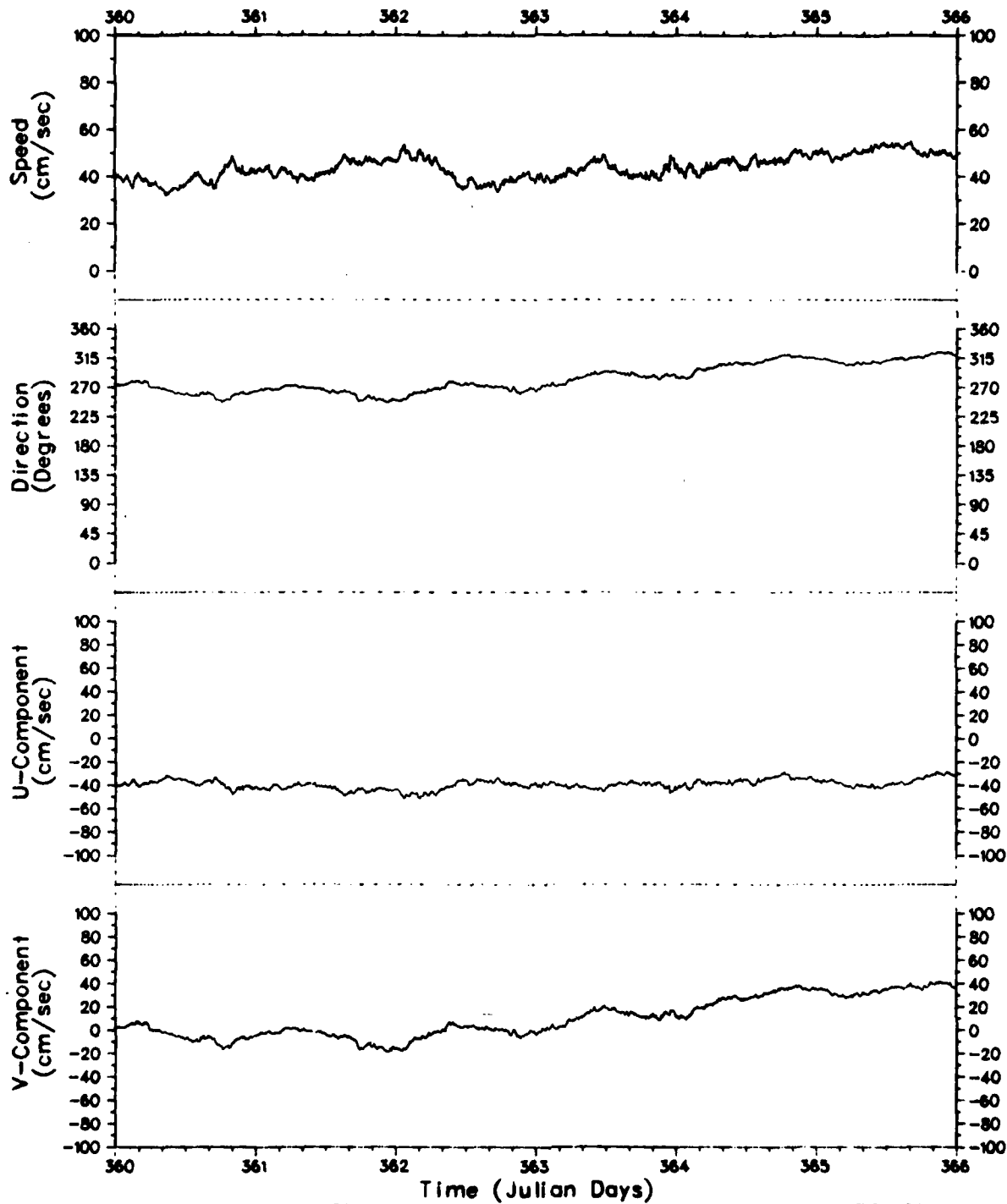
Figure 164.



File : ACM
Meter : 790100
Latitude : 25.805555
Longitude : -89 744165

Array : ATOM79
Depth : 000179
Start : 19 12 1979
End : 14 01 1980

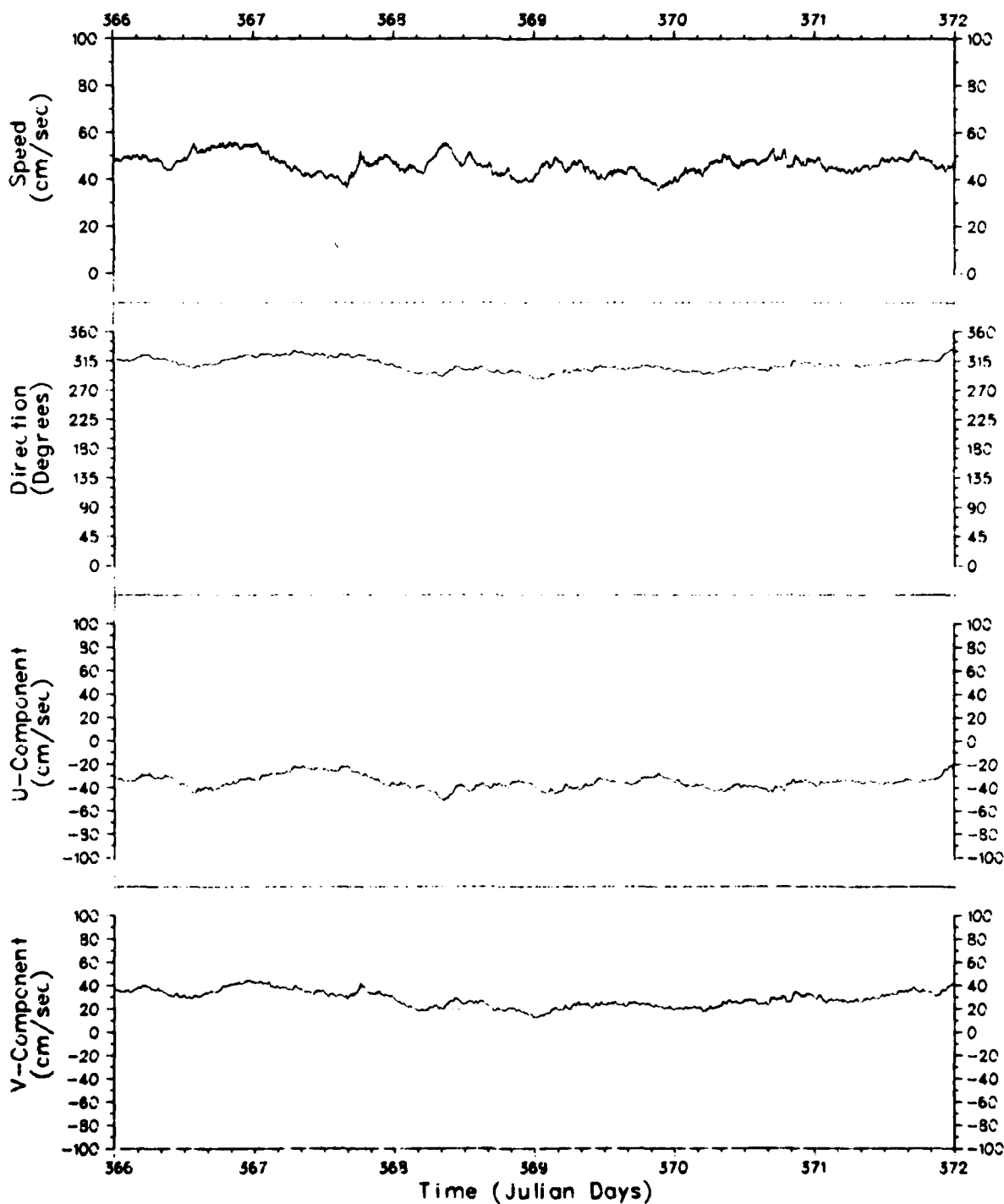
Figure 165.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000179
 Start : 19 12 1979
 End : 14 01 1980

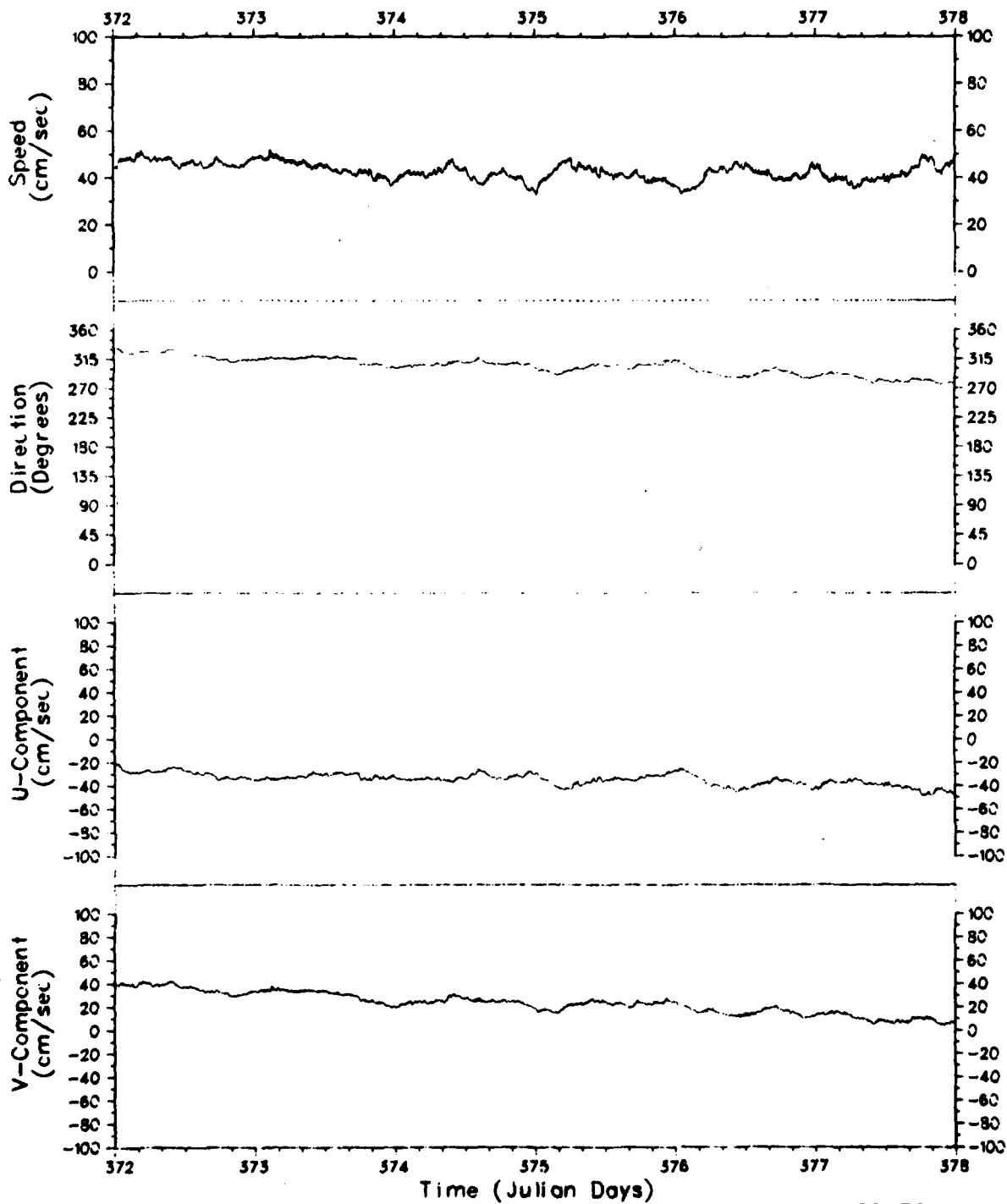
Figure 166.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000179
 Start : 19 12 1979
 End : 14 01 1980

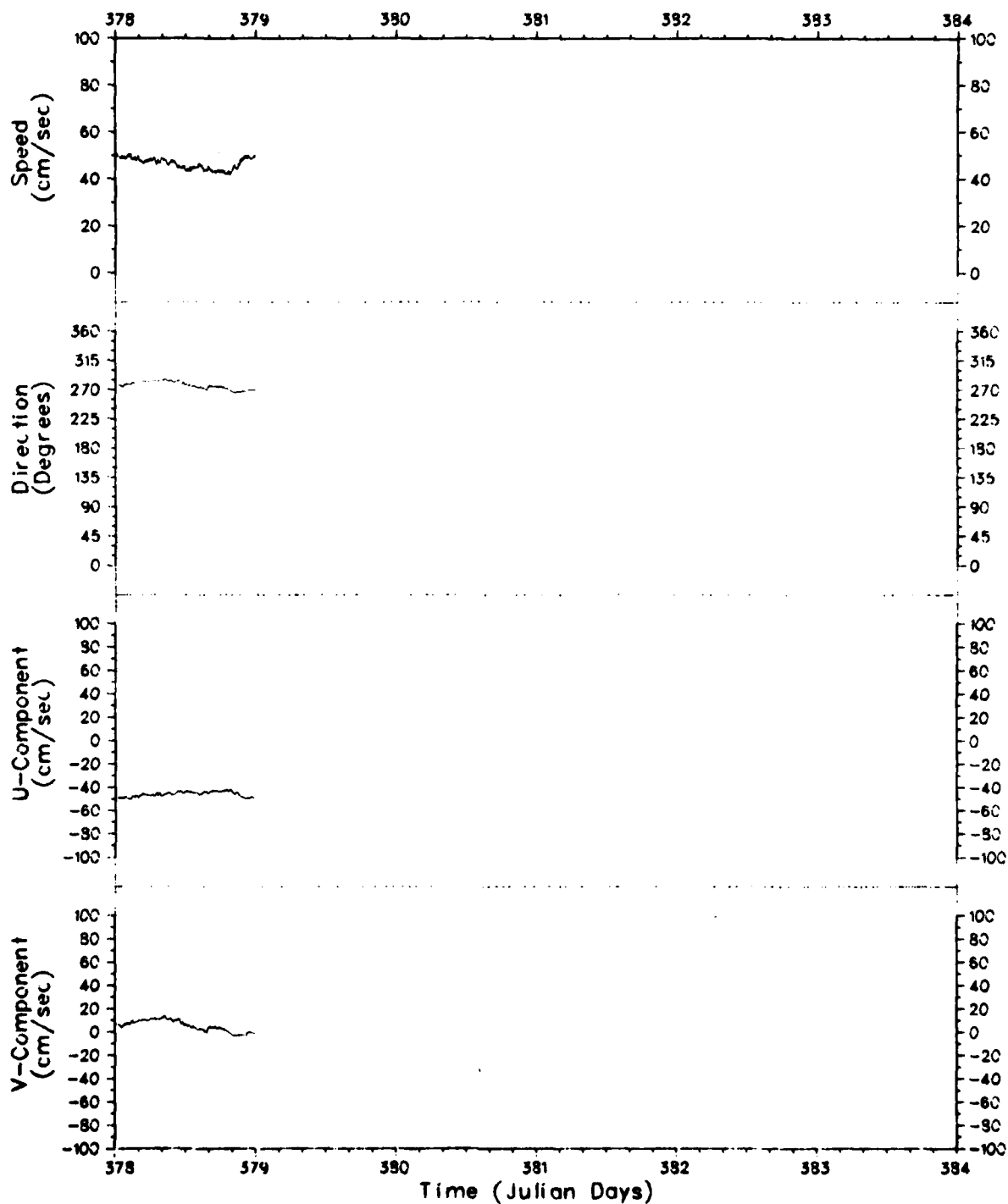
Figure 167.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000179
 Start : 19 12 1979
 End : 14 01 1980

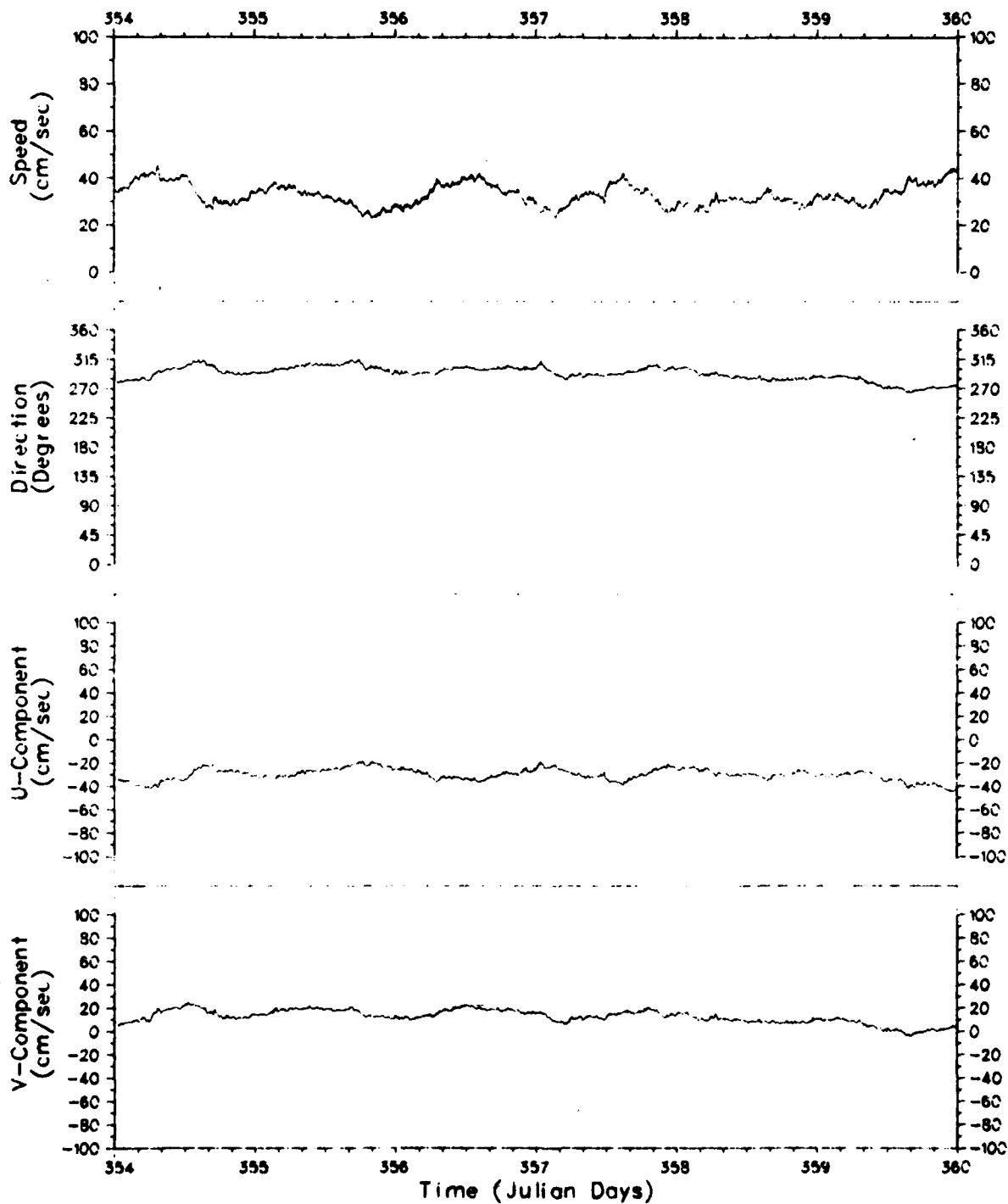
Figure 168.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000179
 Start : 19 12 1979
 End : 14 01 1980

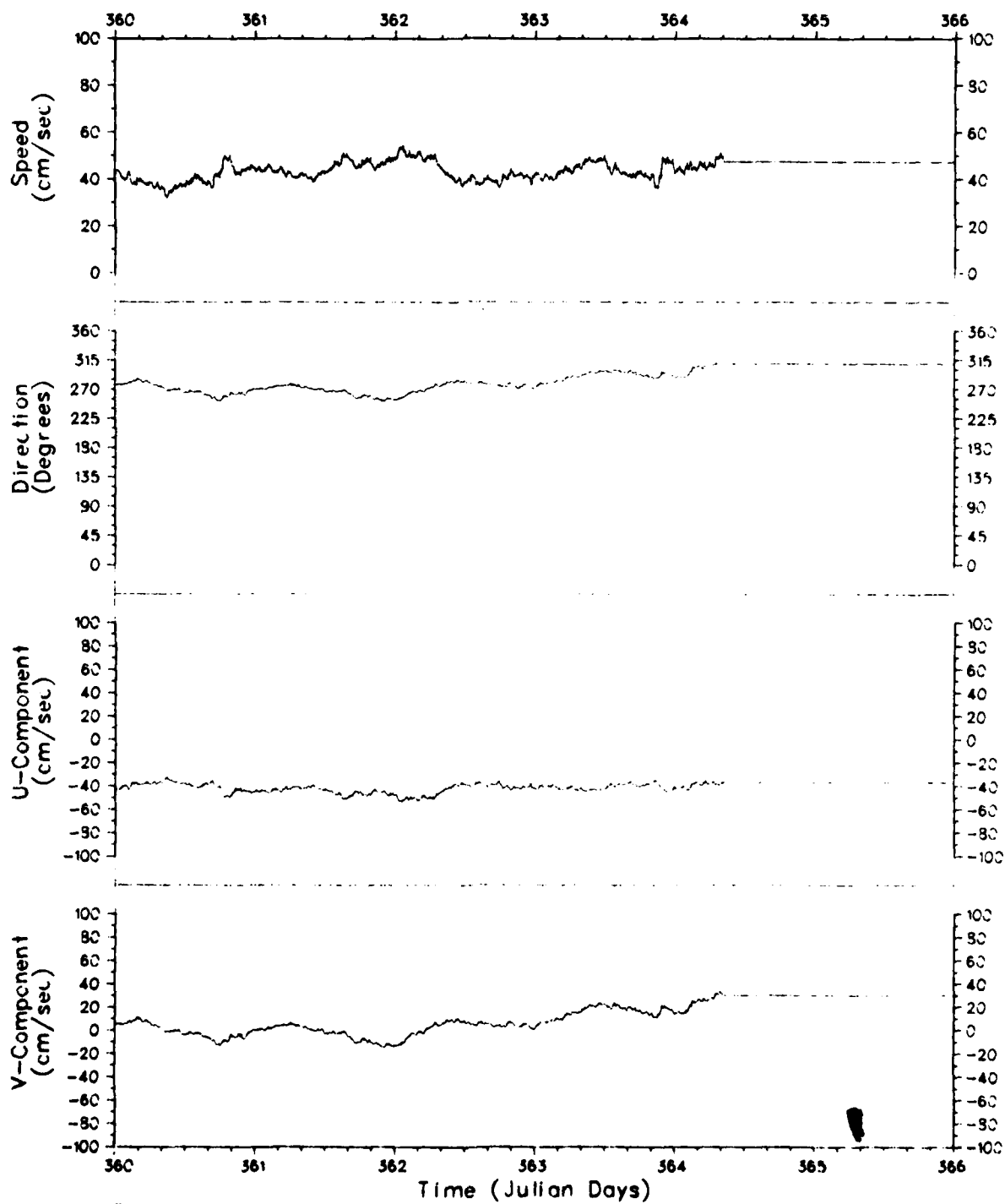
Figure 169.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

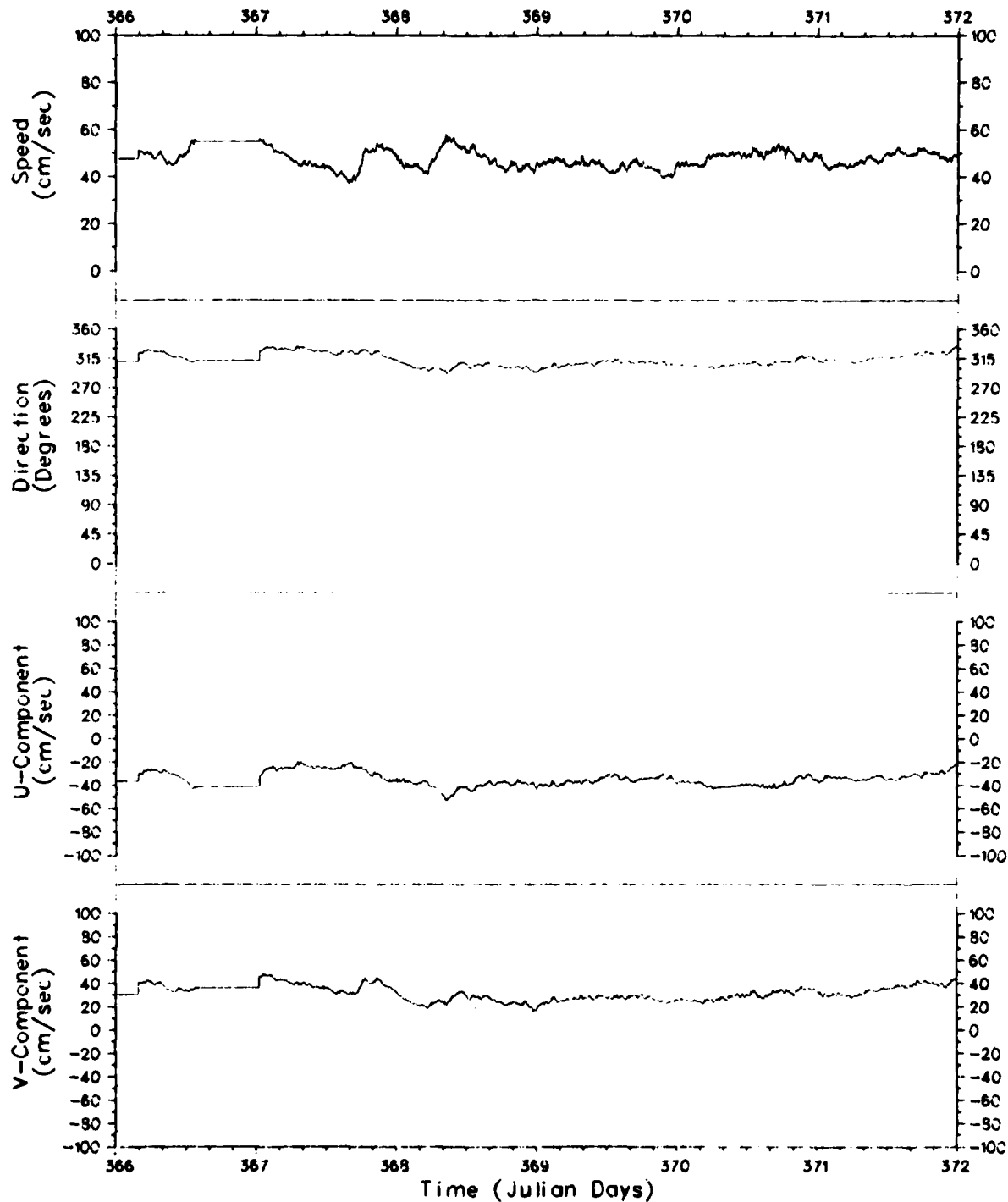
Array : ATOM79
 Depth : 000186
 Start : 19 12 1979
 End : 14 01 1980

Figure 170.



File :	ACM	Array :	ATOM79
Meter :	790100	Depth :	000136
Latitude :	25.805555	Start :	19 12 1979
Longitude :	-89 744165	End :	14 01 1980

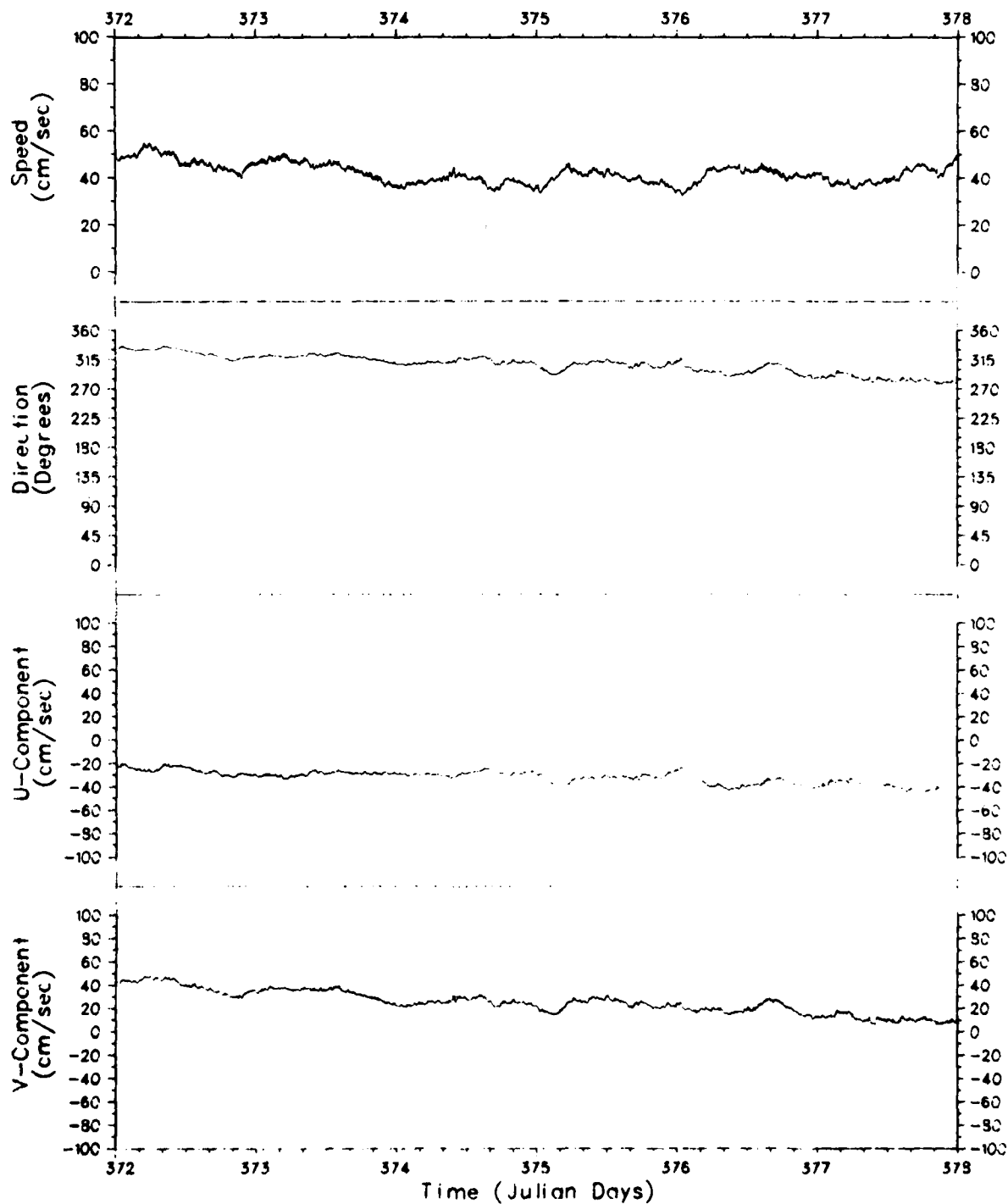
Figure 171.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

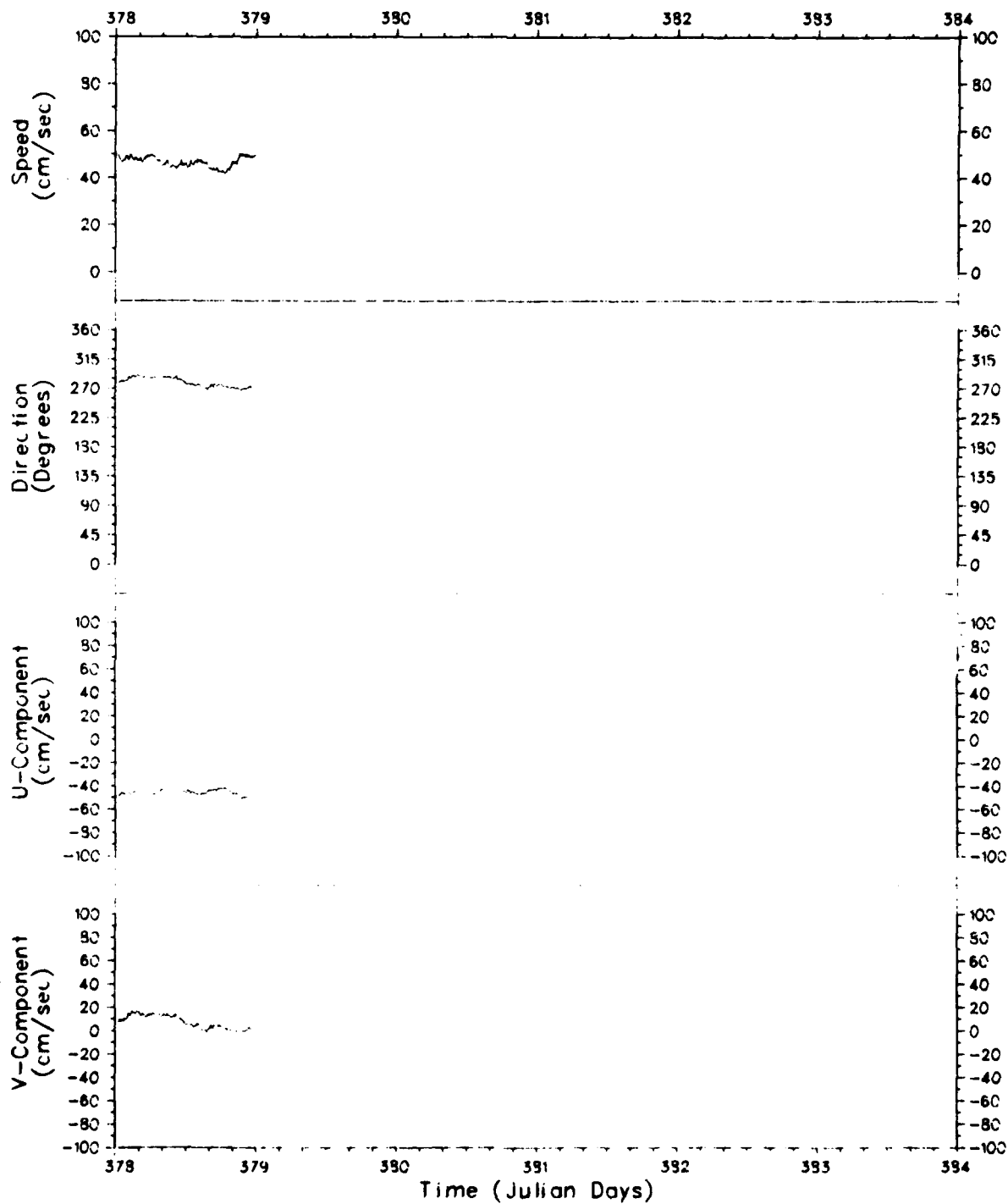
Array : ATOM79
 Depth : 000186
 Start : 19 12 1979
 End : 14 01 1980

Figure 172.



File	ACM	Array	ATOM79
Meter	790100	Depth	000186
Latitude	25 805555	Start	19 12 1979
Longitude	-89 744165	End	14 01 1980

Figure 173.



File : ACM
 Meter : 790100
 Latitude : 25 805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000186
 Start : 19 12 1979
 End : 14 01 1980

Figure 174.

AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC P/O 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
UNCLASSIFIED NORDA-TN-85

AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC P/O 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
UNCLASSIFIED NORDA-TN-85

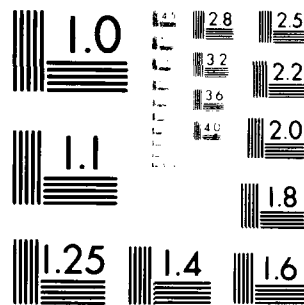
AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC P/O 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
UNCLASSIFIED NORDA-TN-85

AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC P/O 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
UNCLASSIFIED NORDA-TN-85

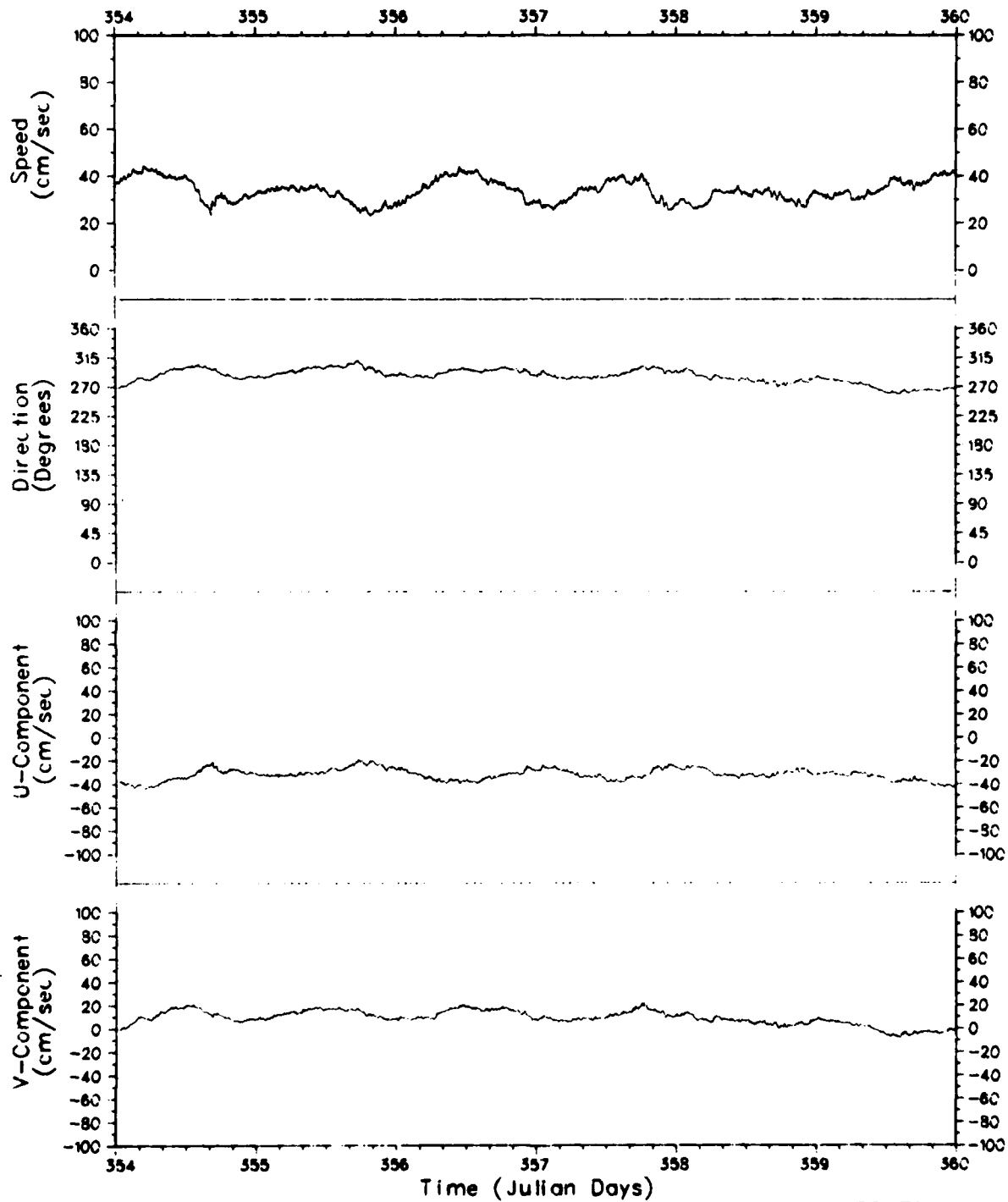
3 17 7
20
2024590

3 17 7
20
2024590

3 17 7
20
2024590



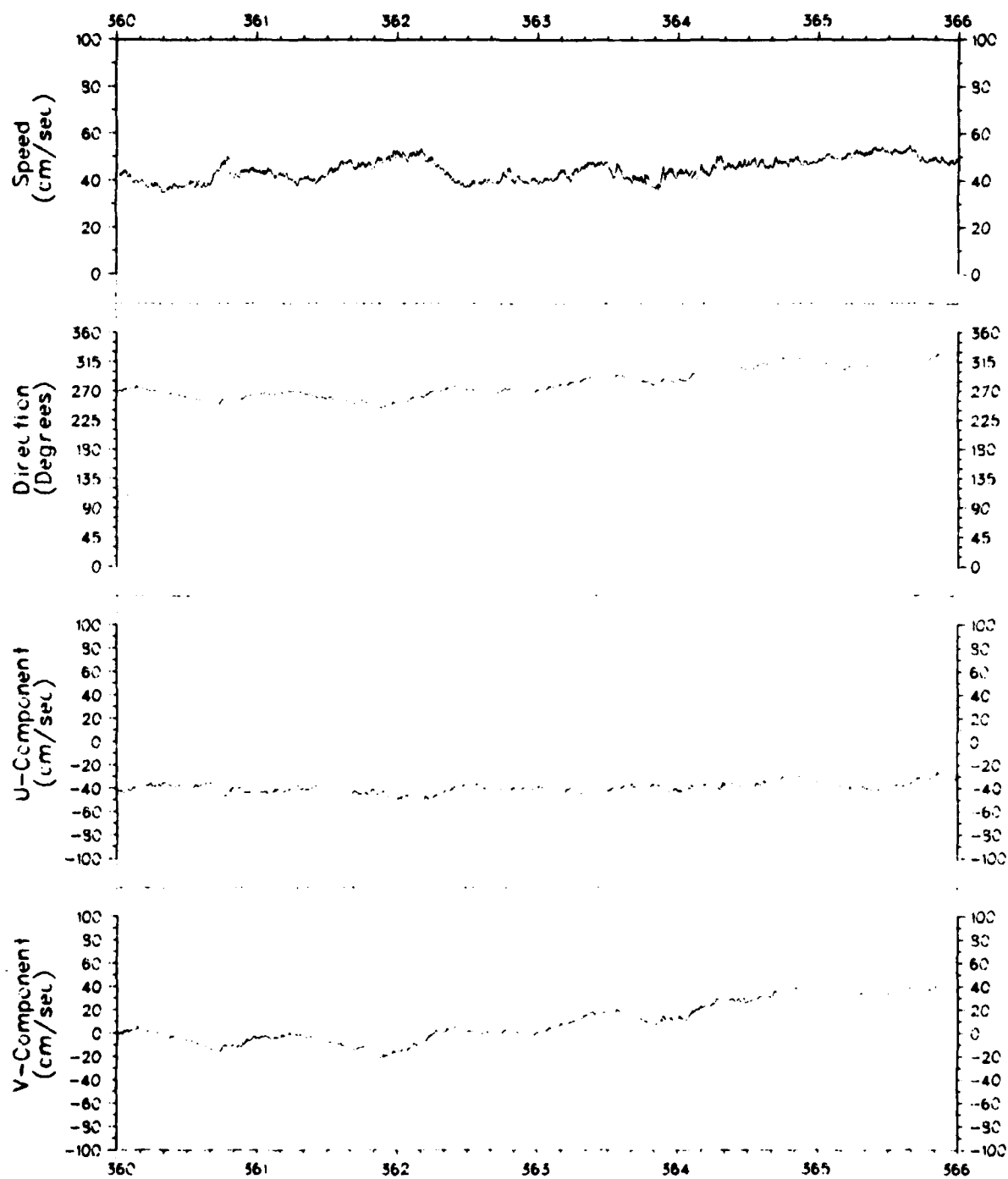
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000193
 Start : 19 12 1979
 End : 14 01 1980

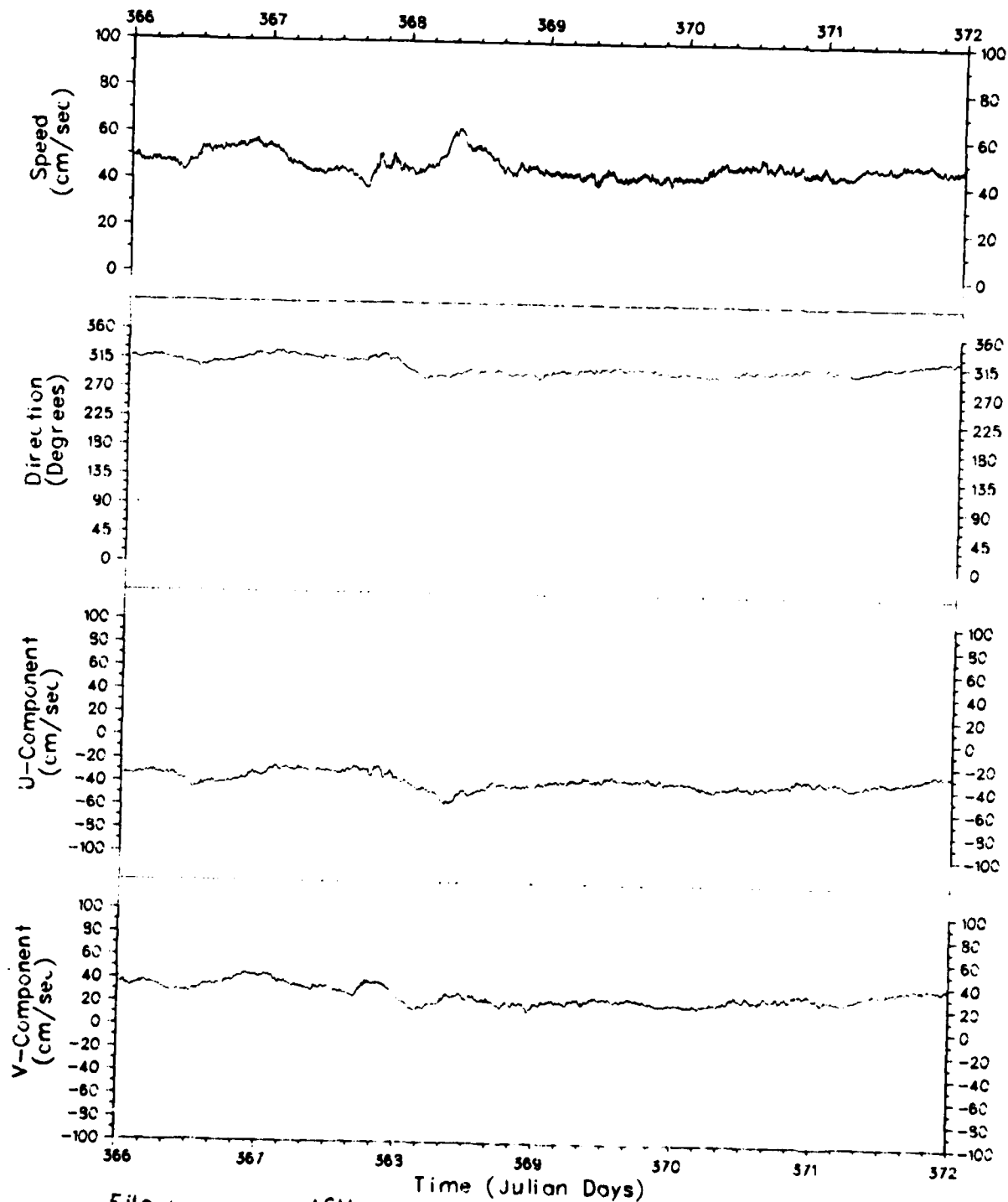
Figure 175.



File ACM
 Meter 790100
 Latitude 25 305555
 Longitude -89 744165

Array ATOM79
 Depth 000193
 Start : 19 12 1979
 End : 14 01 1980

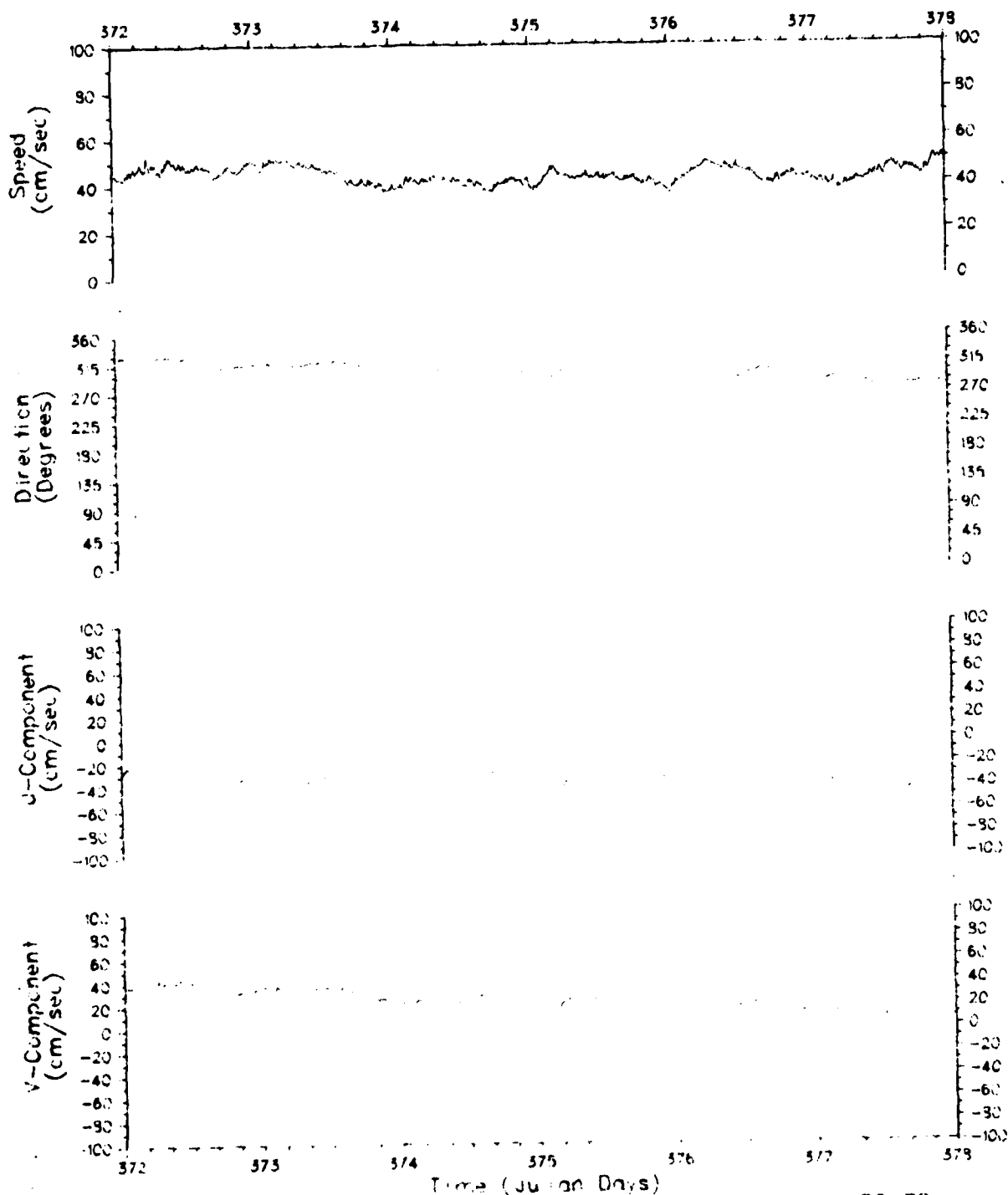
Figure 176.



File : ACM
 Meter : 790100
 Latitude : 25 805555
 Longitude : -89 744165

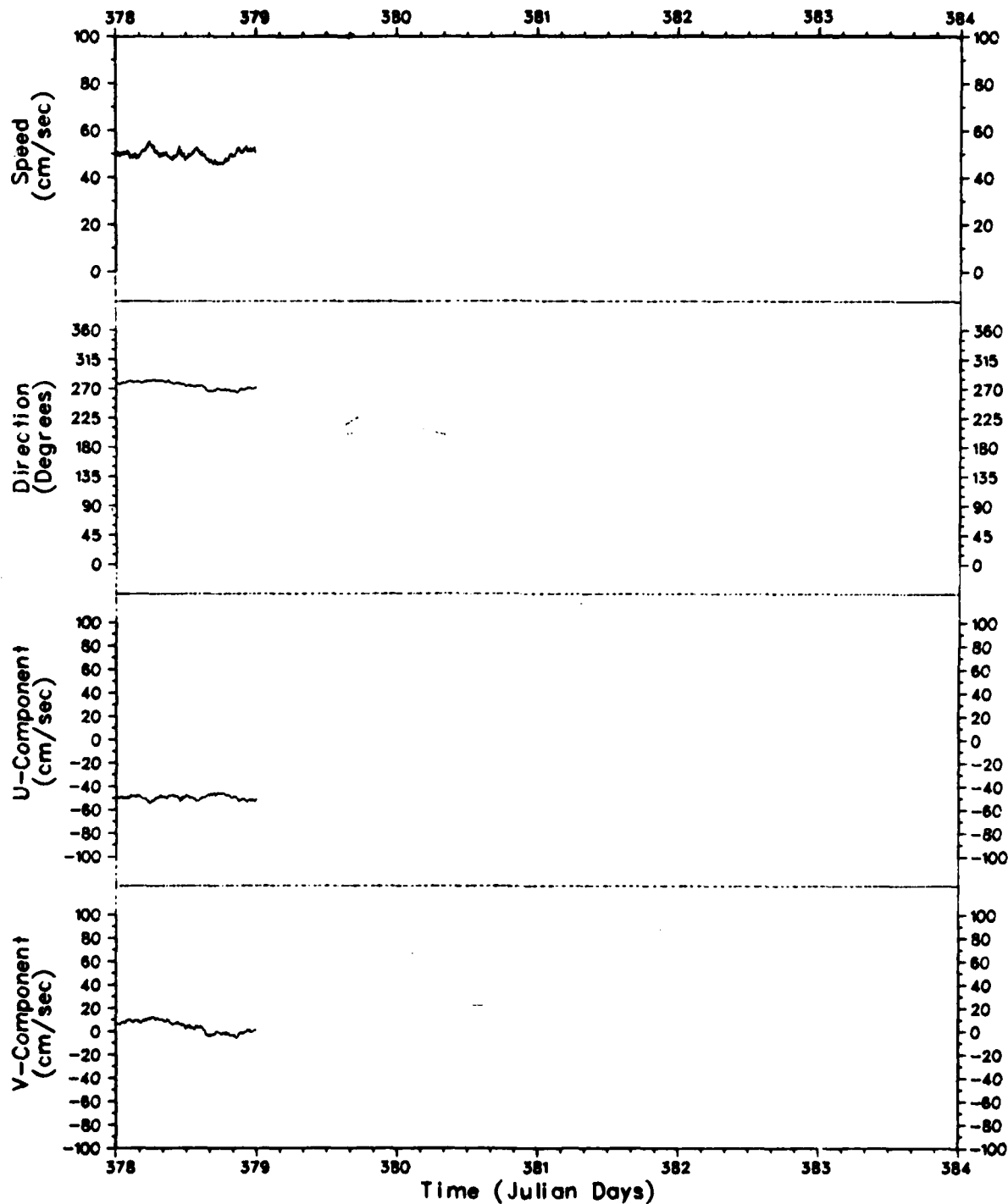
Array : ATOM79
 Depth : 000193
 Start : 19 12 1979
 End : 14 01 1980

Figure 177.



File	ACM	Array	ATOM79
Meter	790100	Depth	000193
Latitude	25 305555	Start	19 12 1979
Longitude	-39 744165	End	14 01 1980

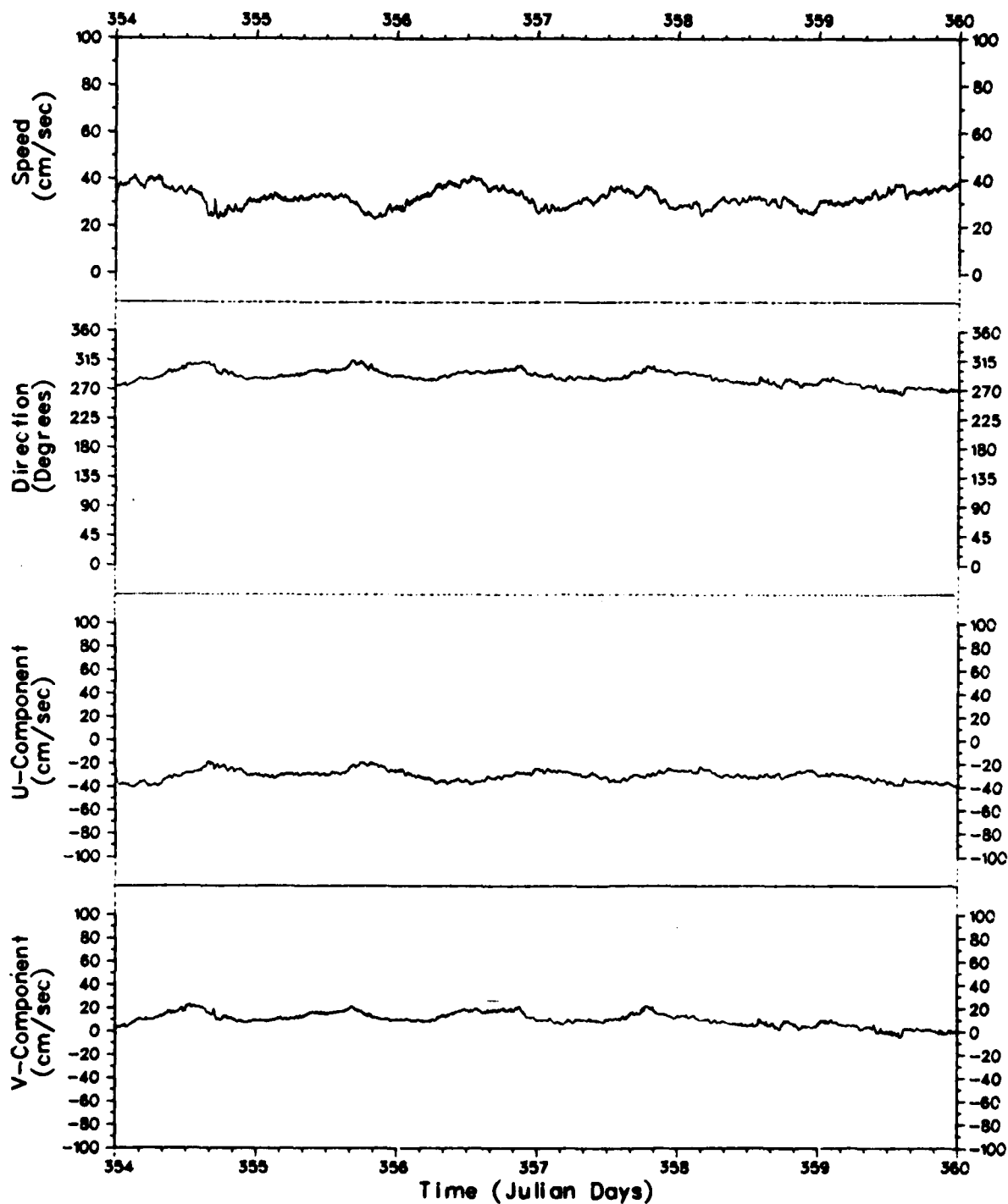
Figure 178.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000193
 Start : 19 12 1979
 End : 14 01 1980

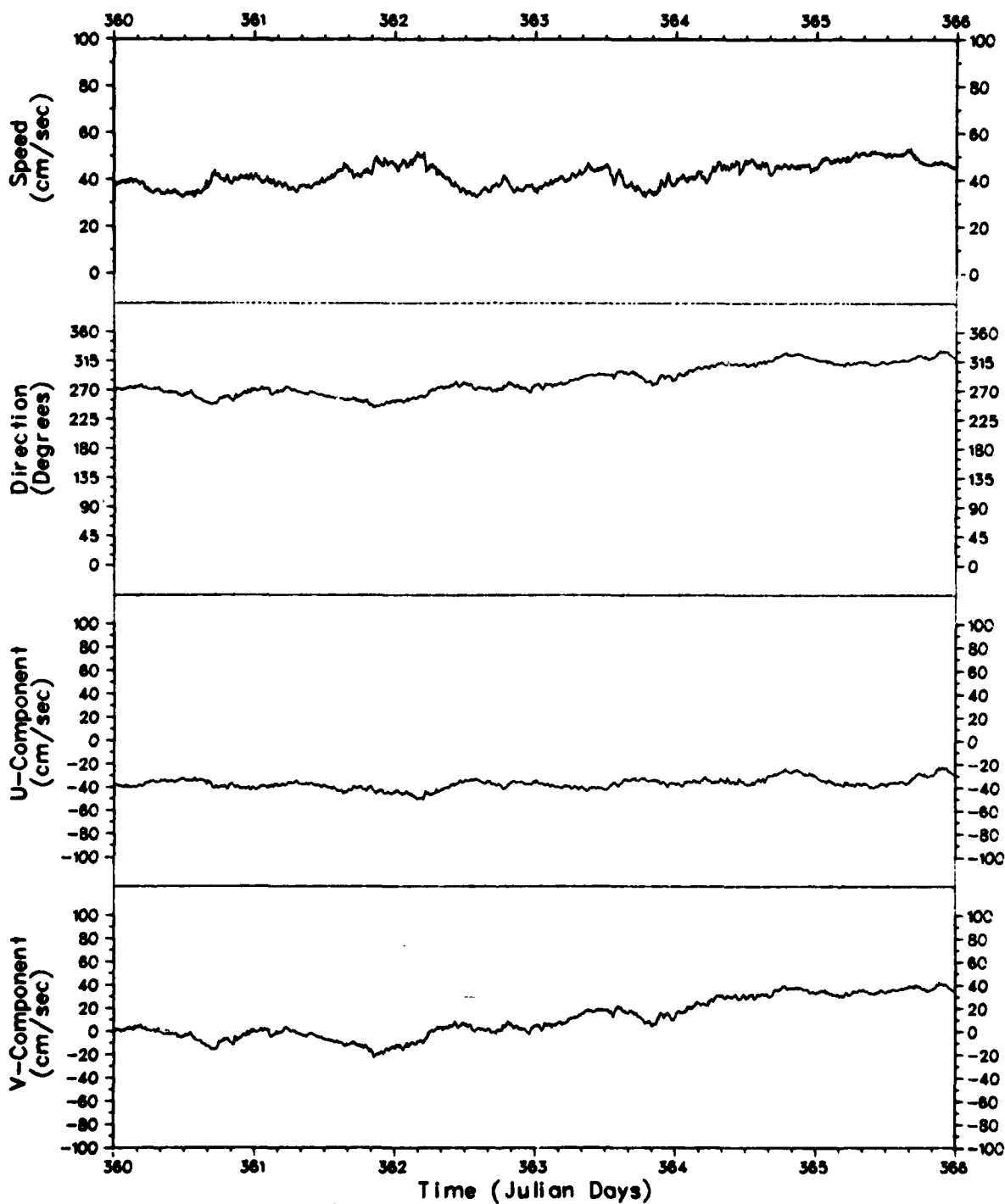
Figure 179.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000200
 Start : 19 12 1979
 End : 14 01 1980

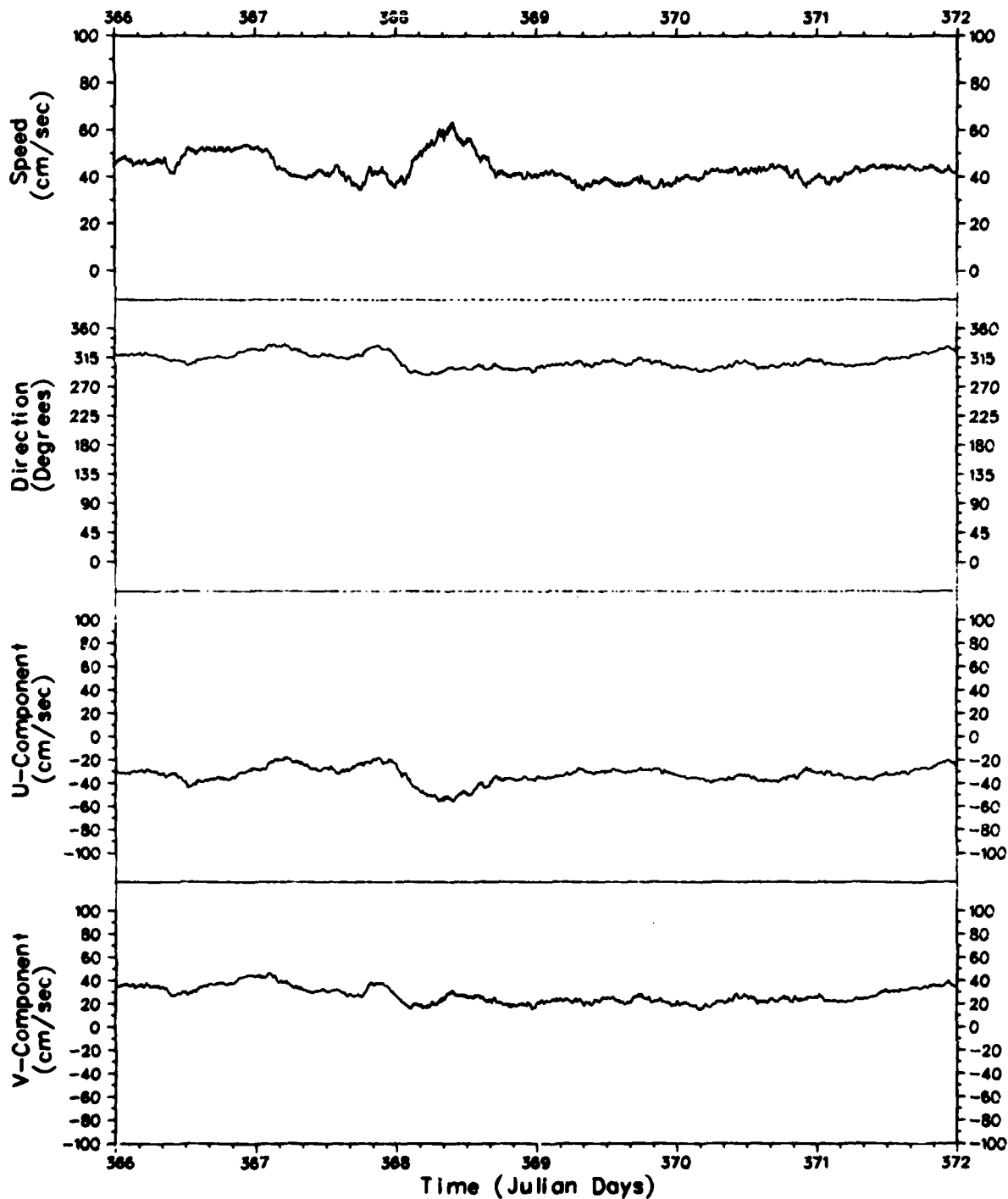
Figure 180.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000200
 Start : 19 12 1979
 End : 14 01 1980

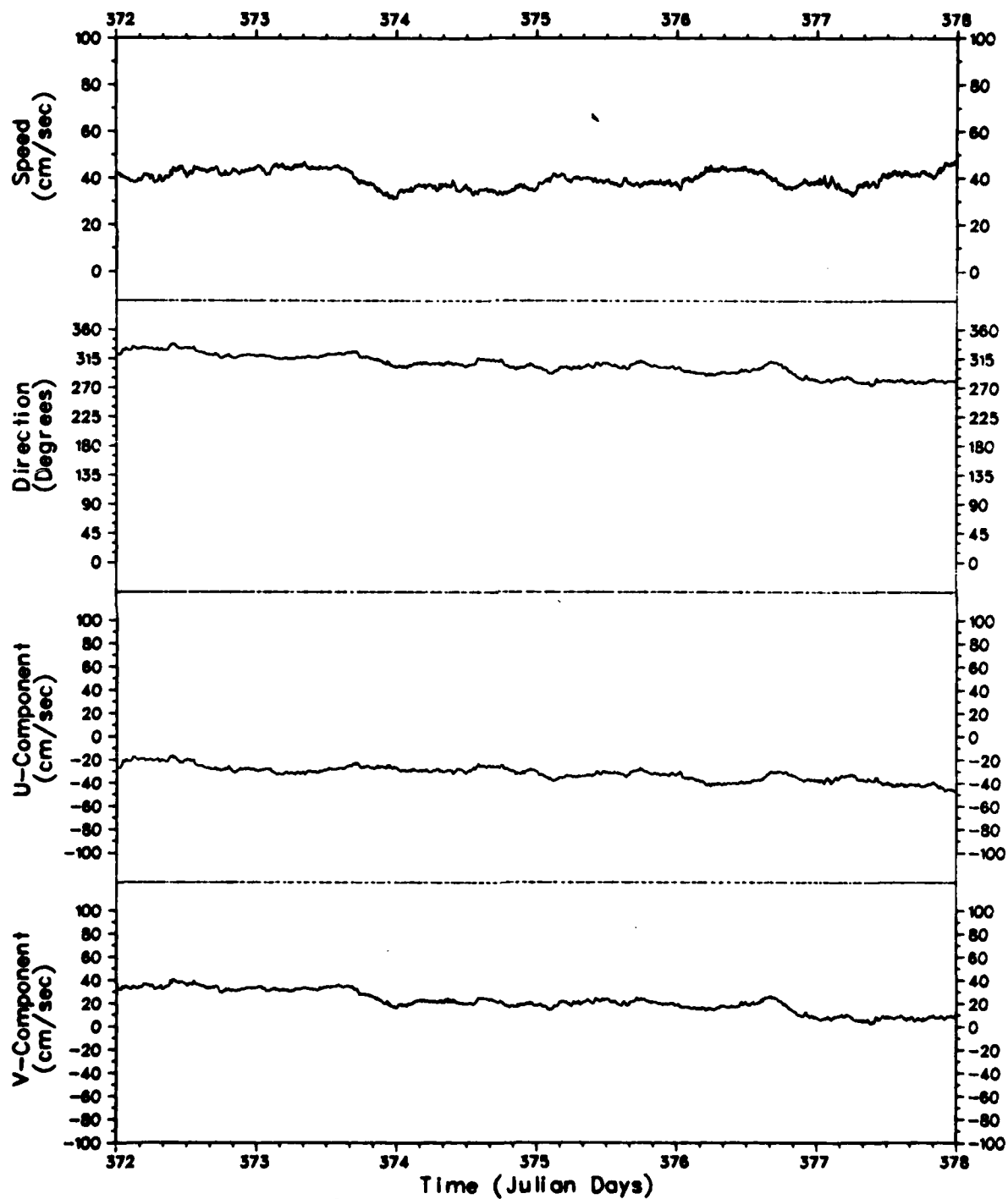
Figure 181.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000200
 Start : 19 12 1979
 End : 14 01 1980

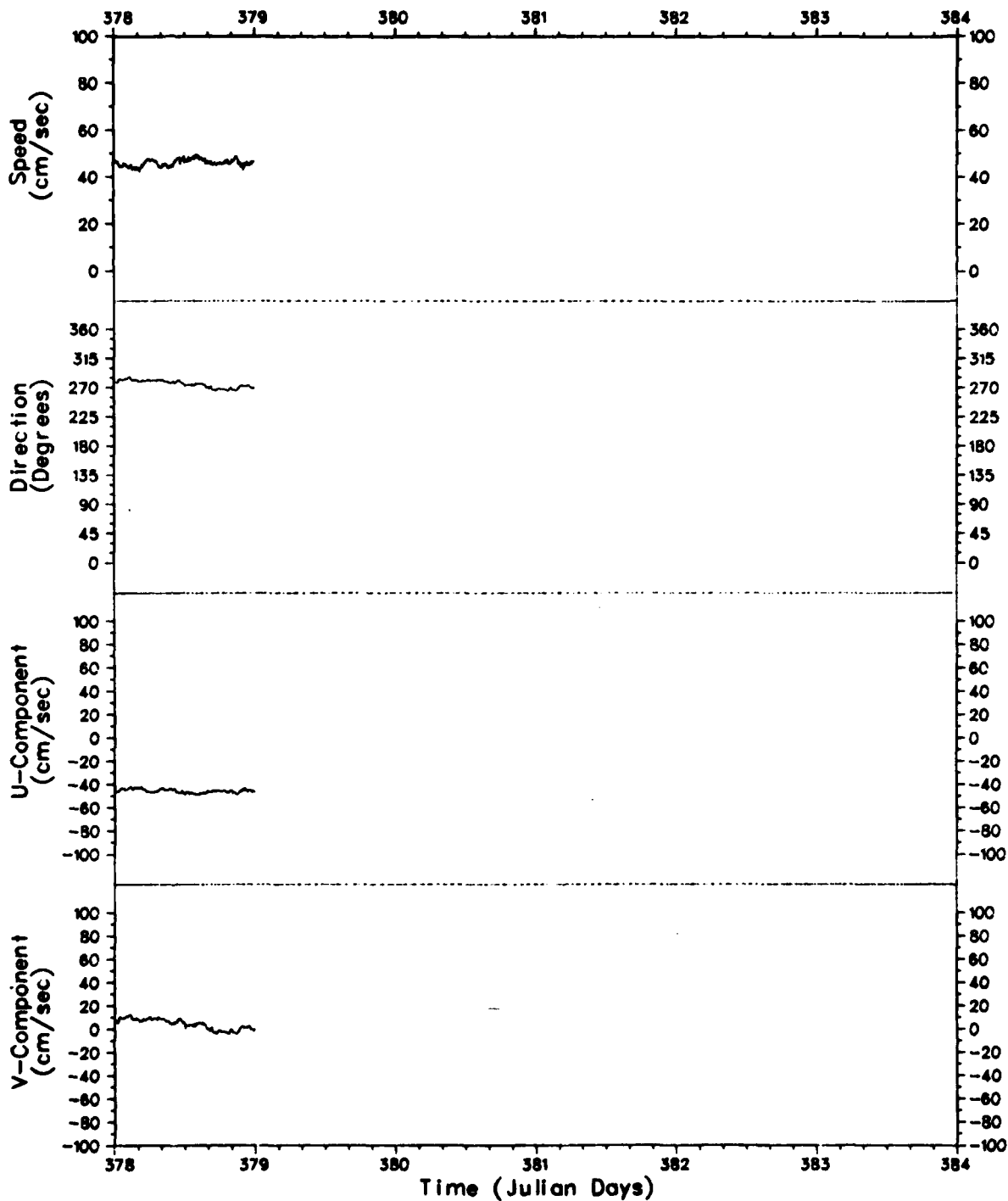
Figure 182.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000200
 Start : 19 12 1979
 End : 14 01 1980

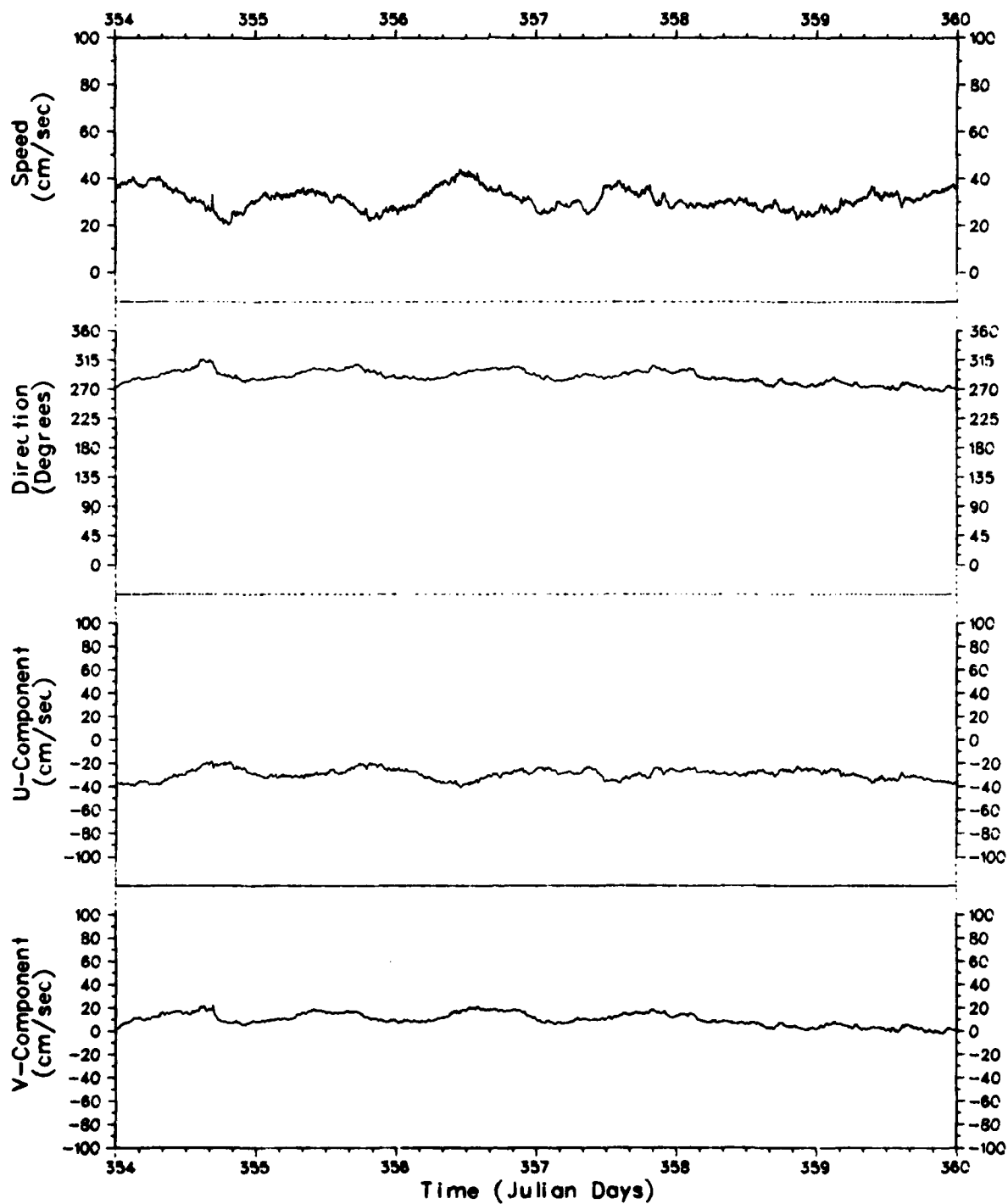
Figure 183.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000200
 Start : 19 12 1979
 End : 14 01 1980

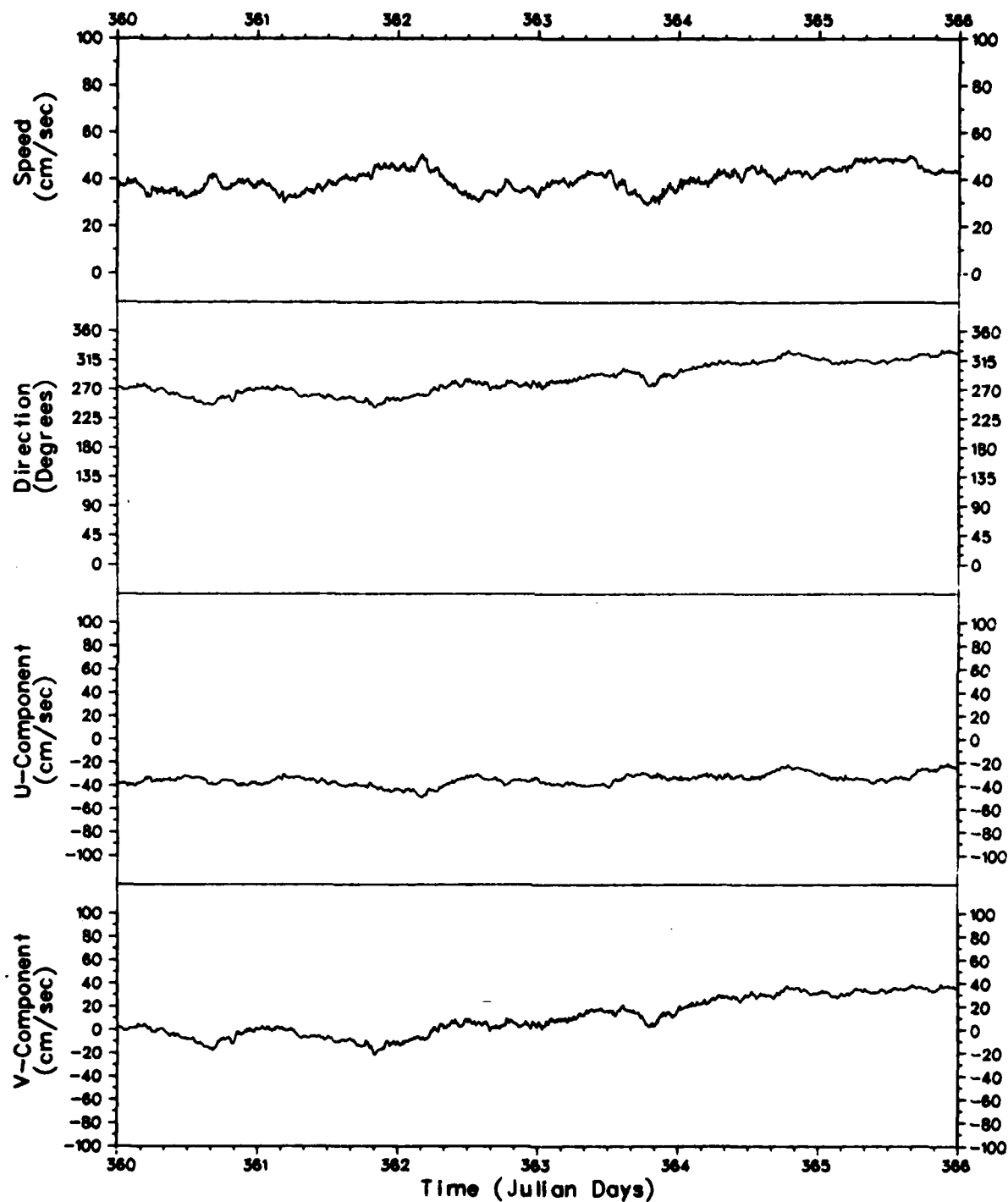
Figure 184.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000207
 Start : 19 12 1979
 End : 14 01 1980

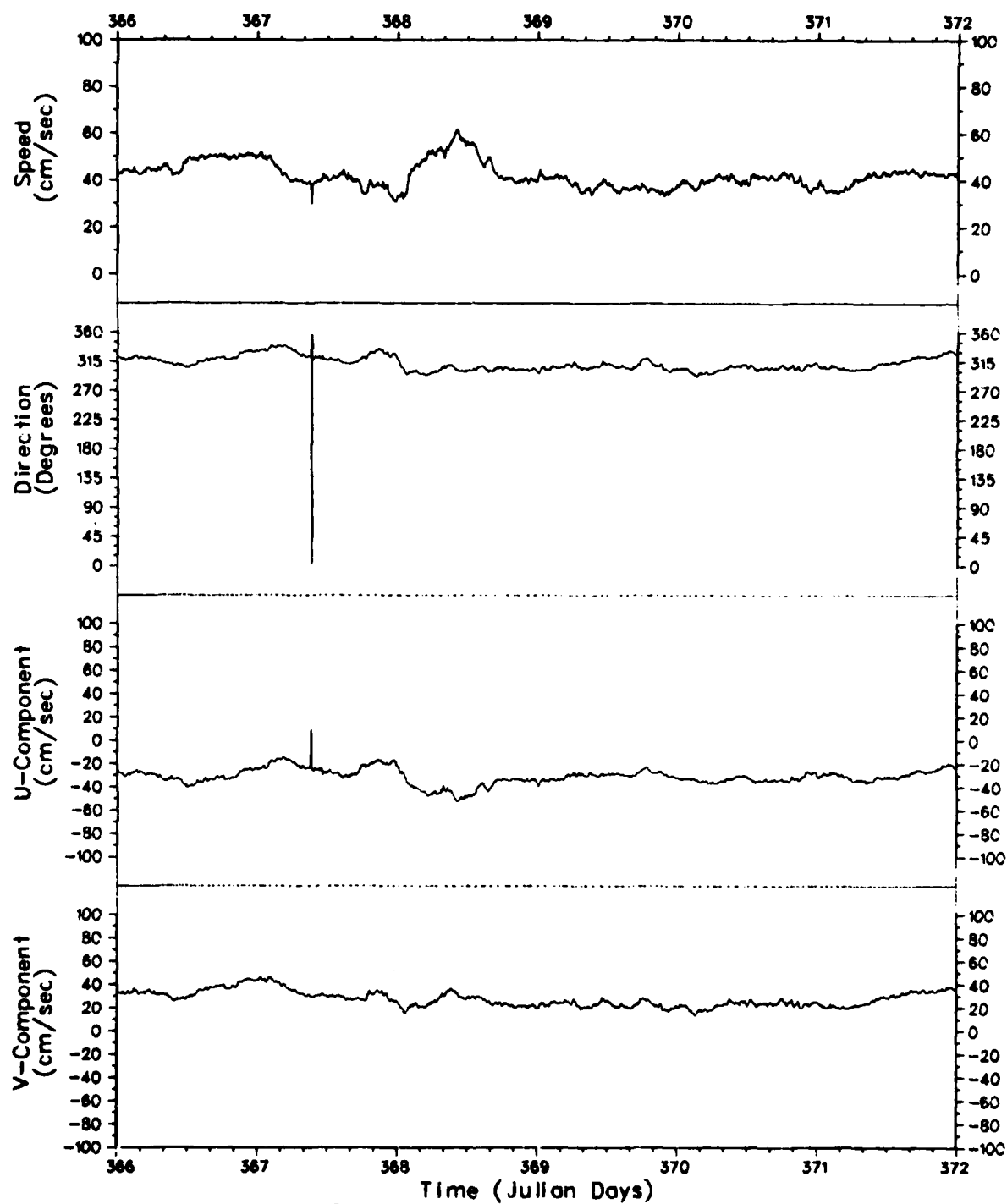
Figure 185.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000207
 Start : 19 12 1979
 End : 14 01 1980

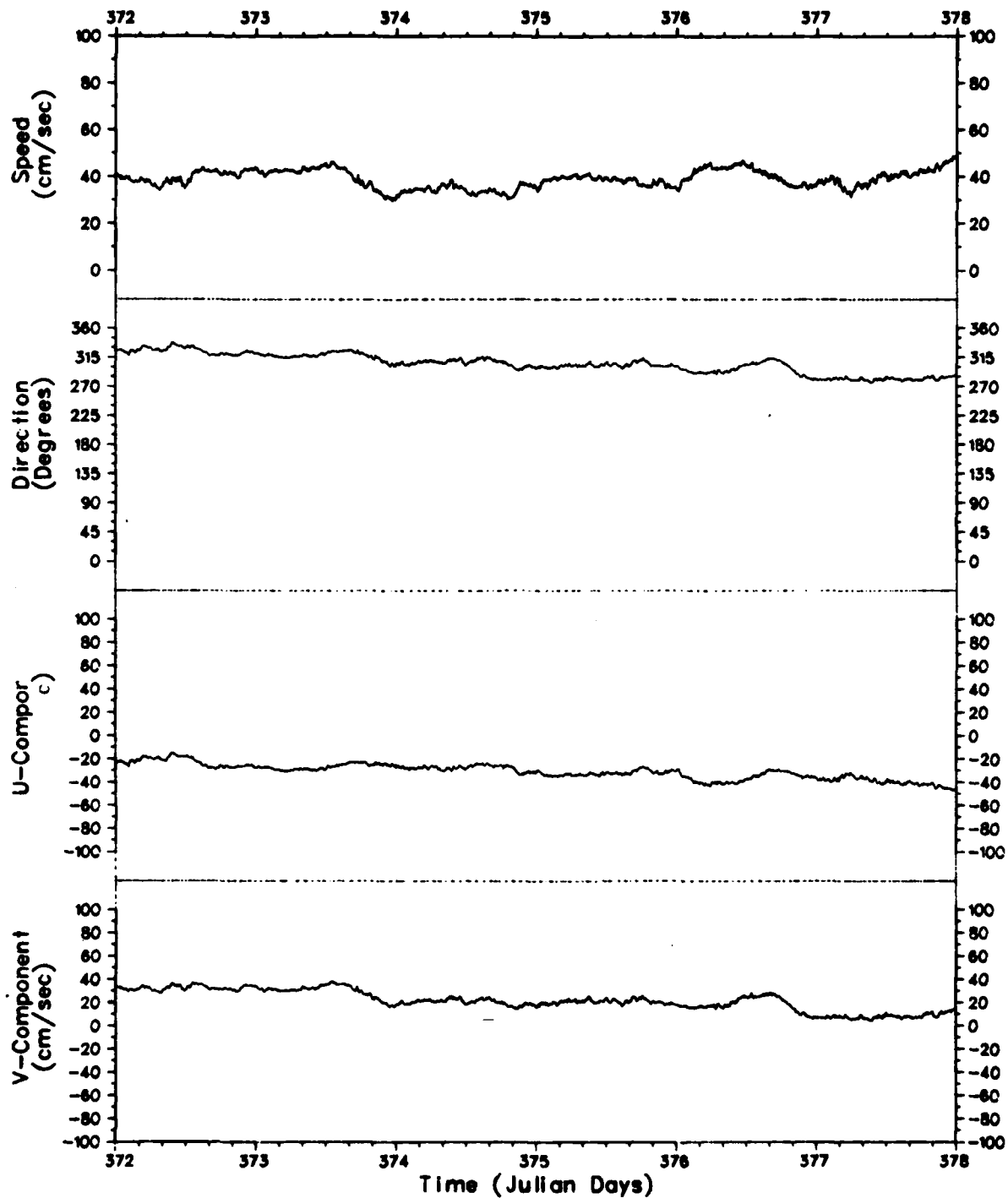
Figure 186.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000207
 Start : 19 12 1979
 End : 14 01 1980

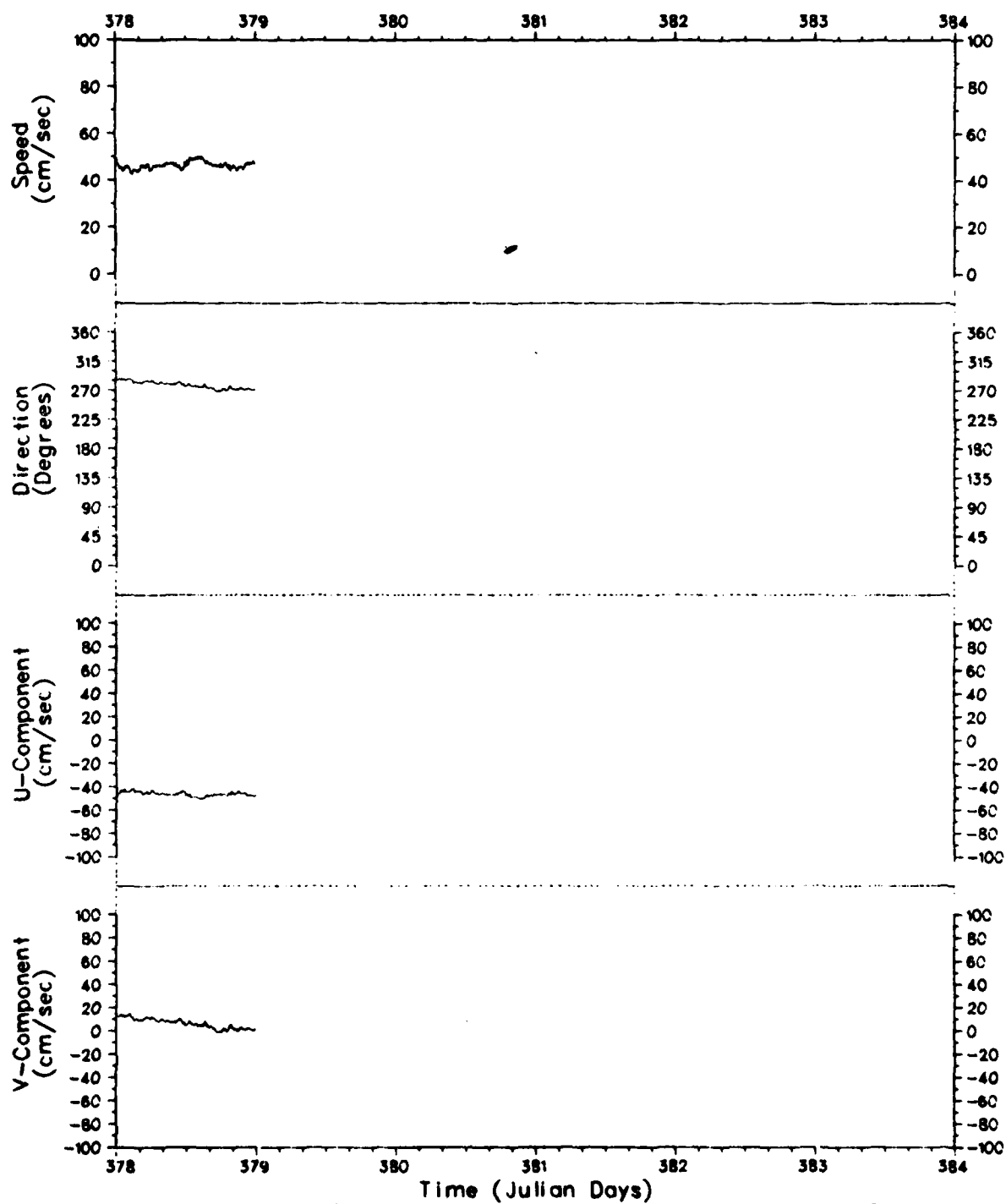
Figure 187.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89.744165

Array : ATOM79
 Depth : 000207
 Start : 19 12 1979
 End : 14 01 1980

Figure 188.



File : ACM
 Meter : 790100
 Latitude : 25.805555
 Longitude : -89 744165

Array : ATOM79
 Depth : 000207
 Start : 19 12 1979
 End : 14 01 1980

Figure 189.

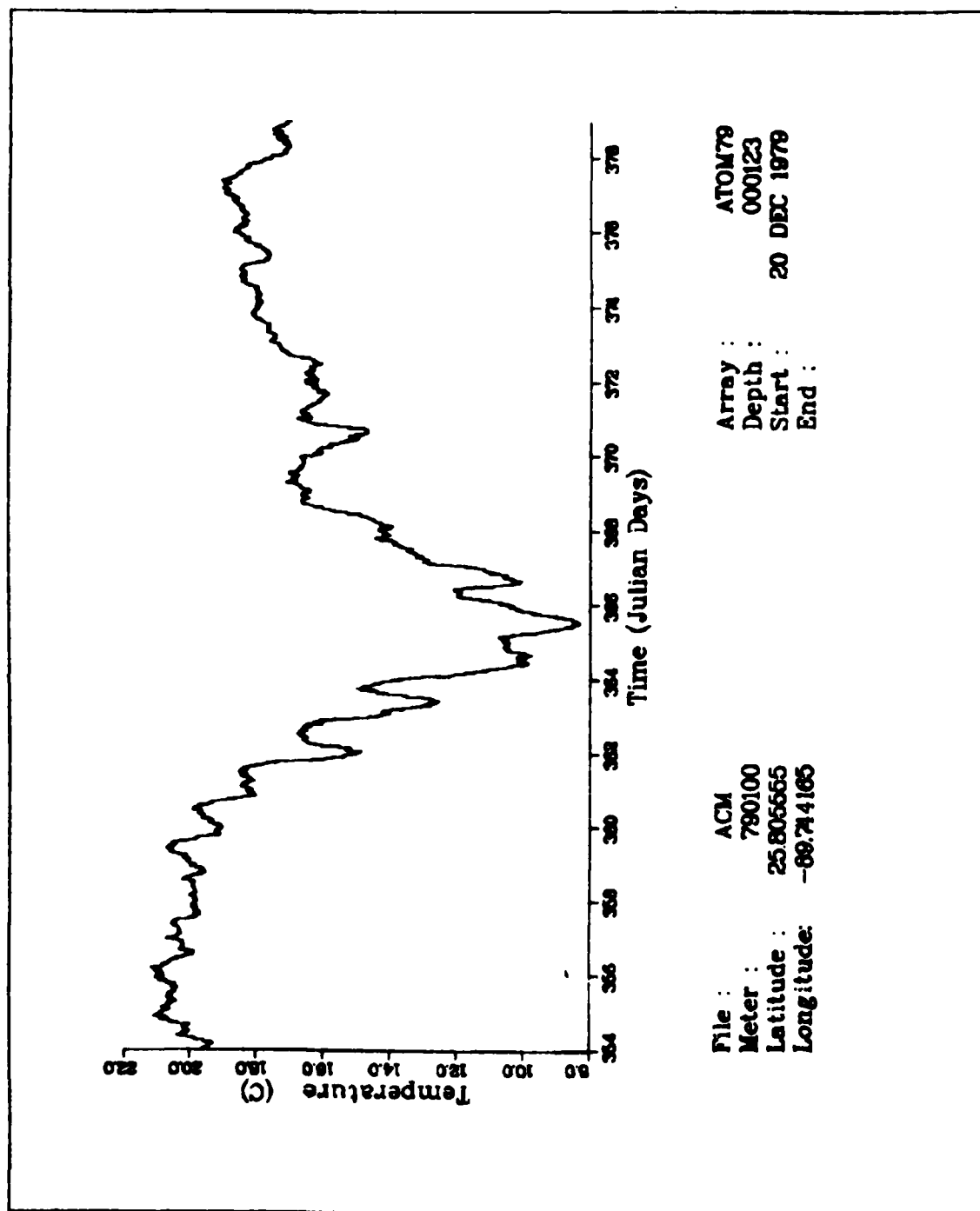


Figure 190.

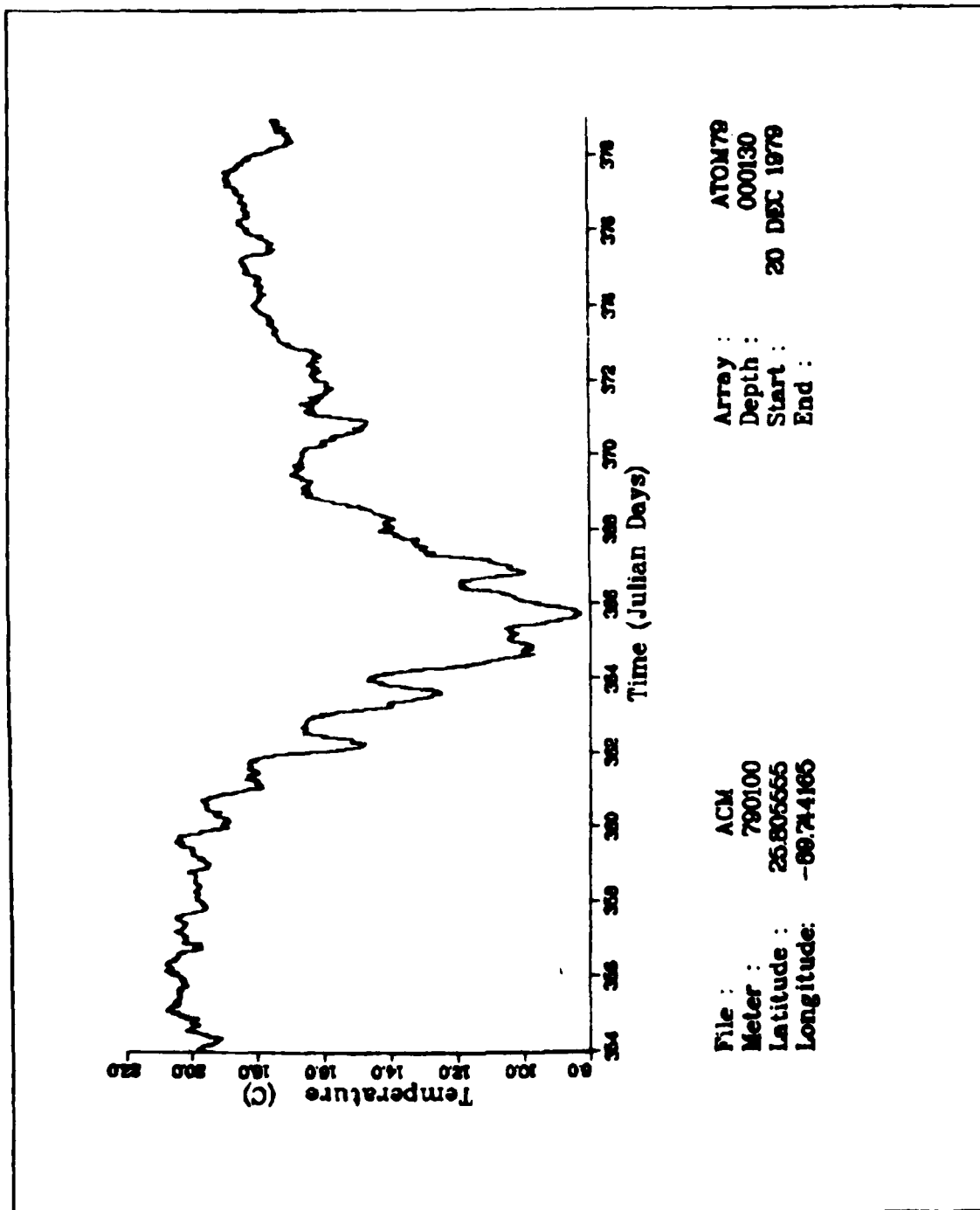


Figure 191.

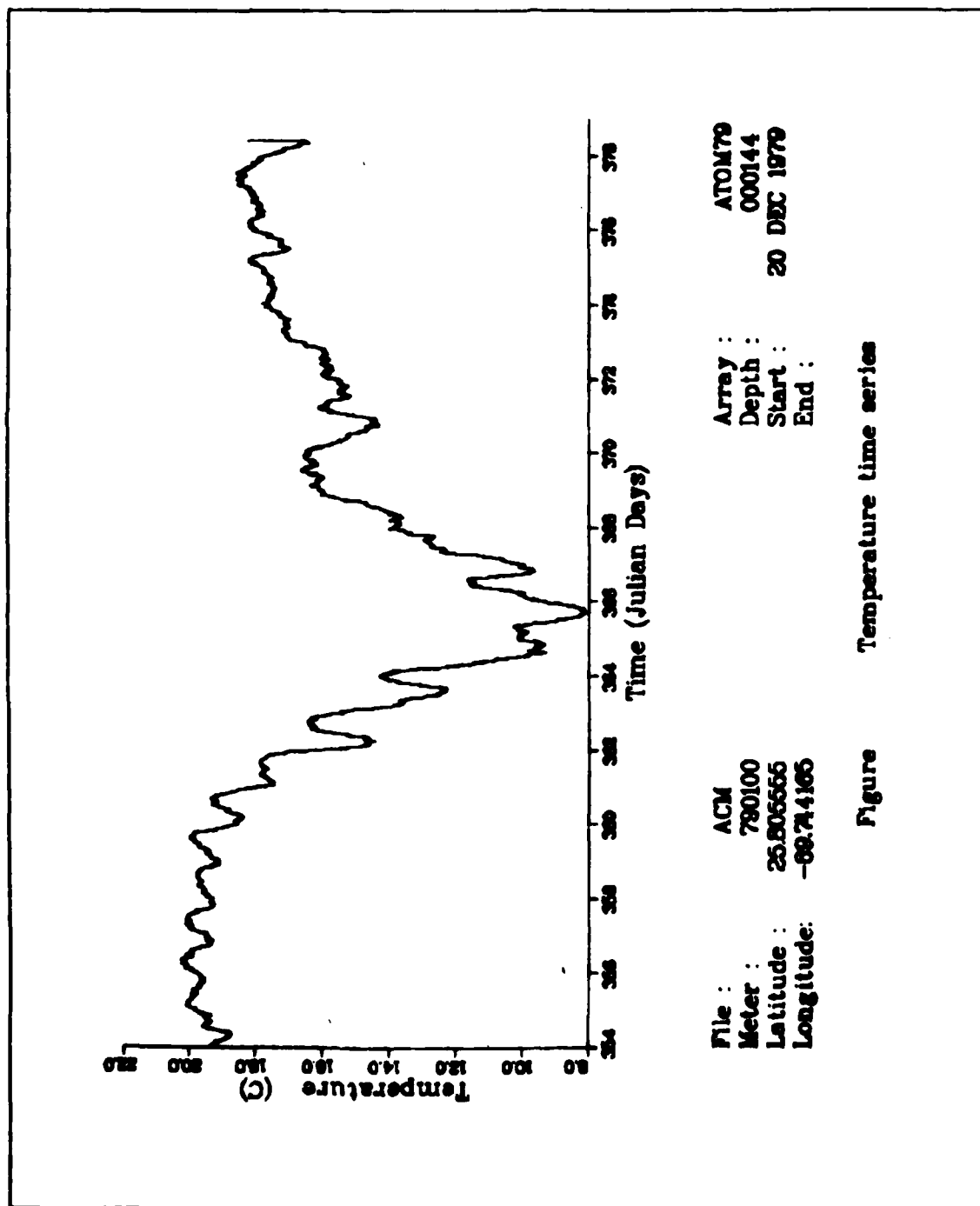


Figure 192.

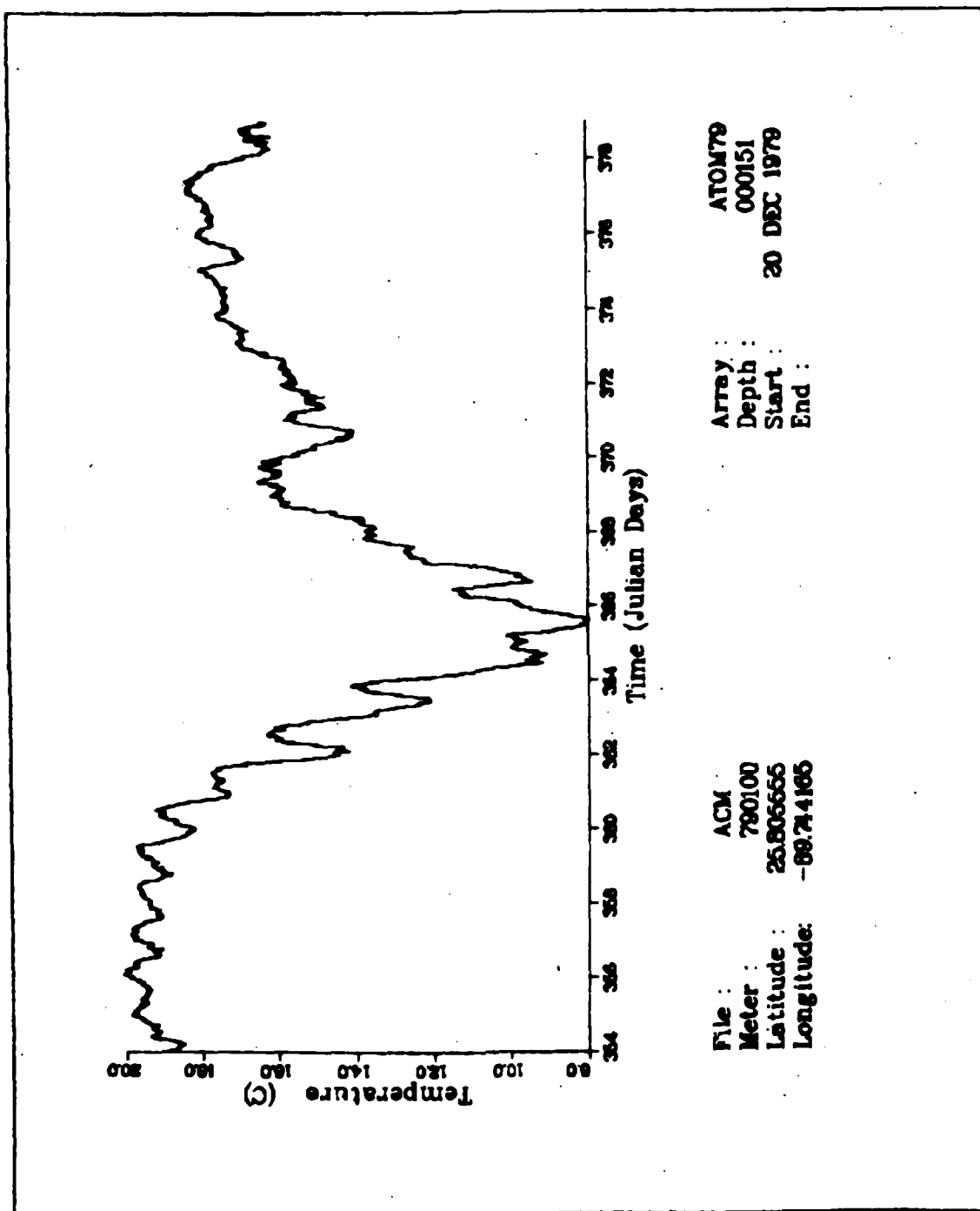


Figure 193.

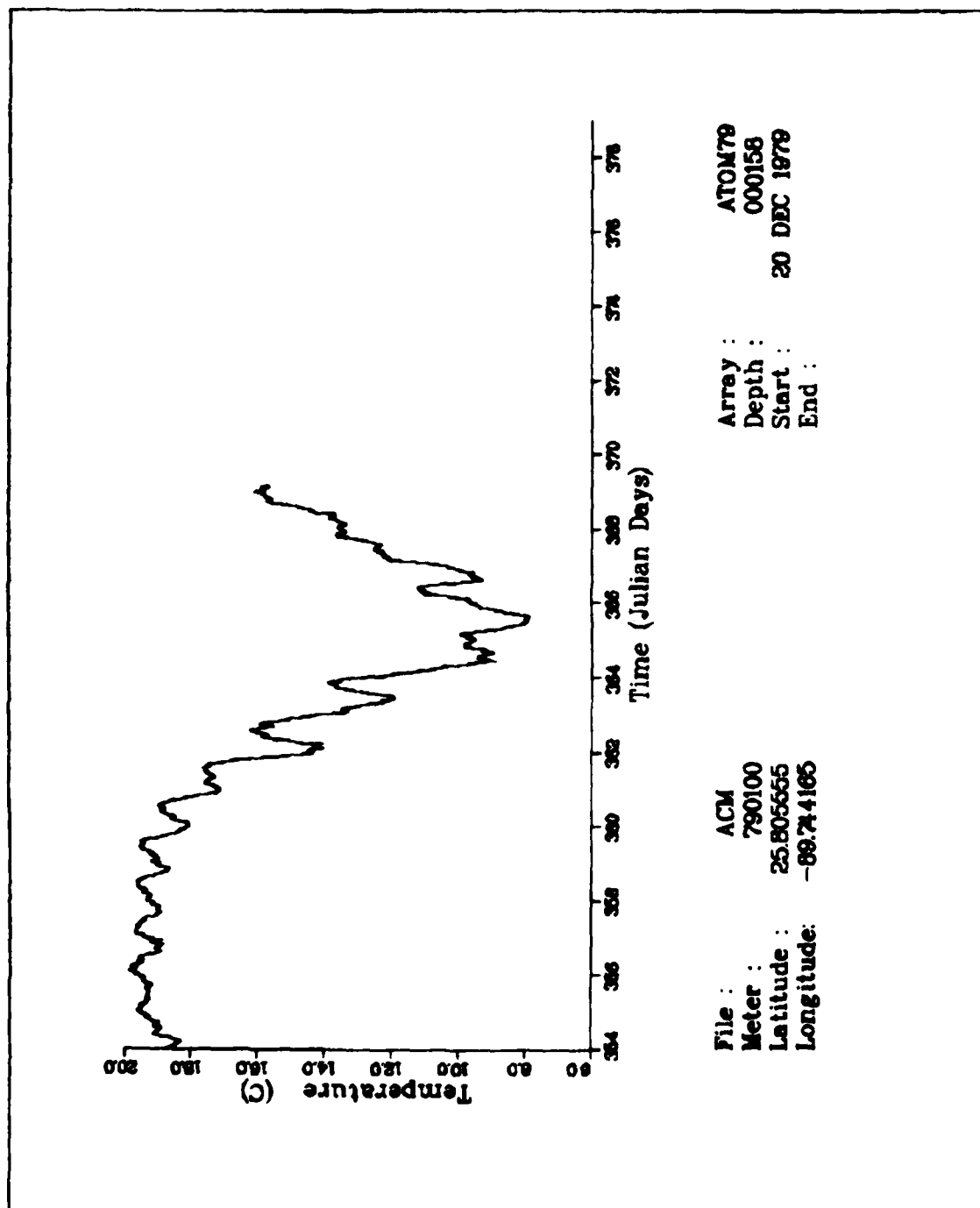


Figure 194.

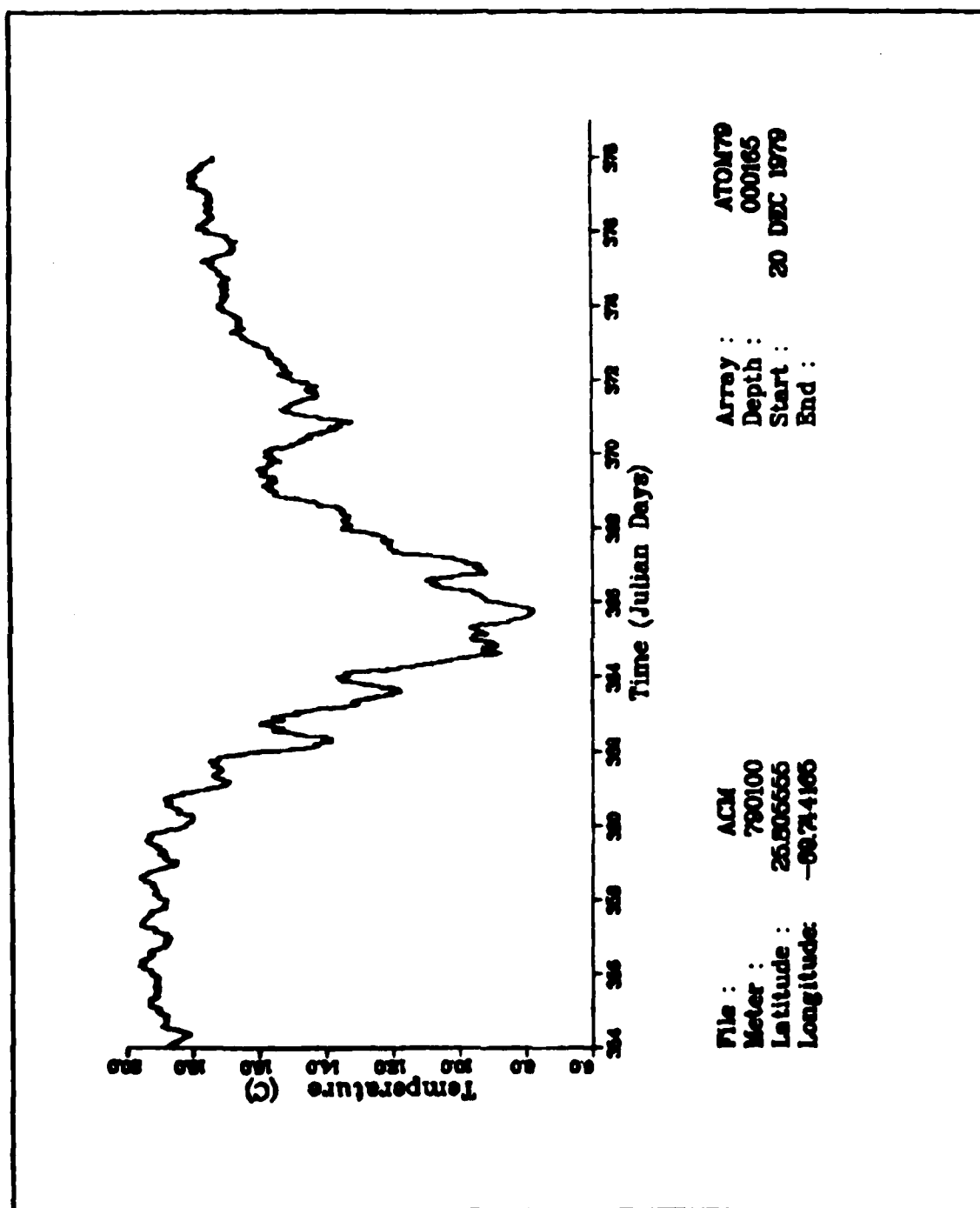


Figure 195.

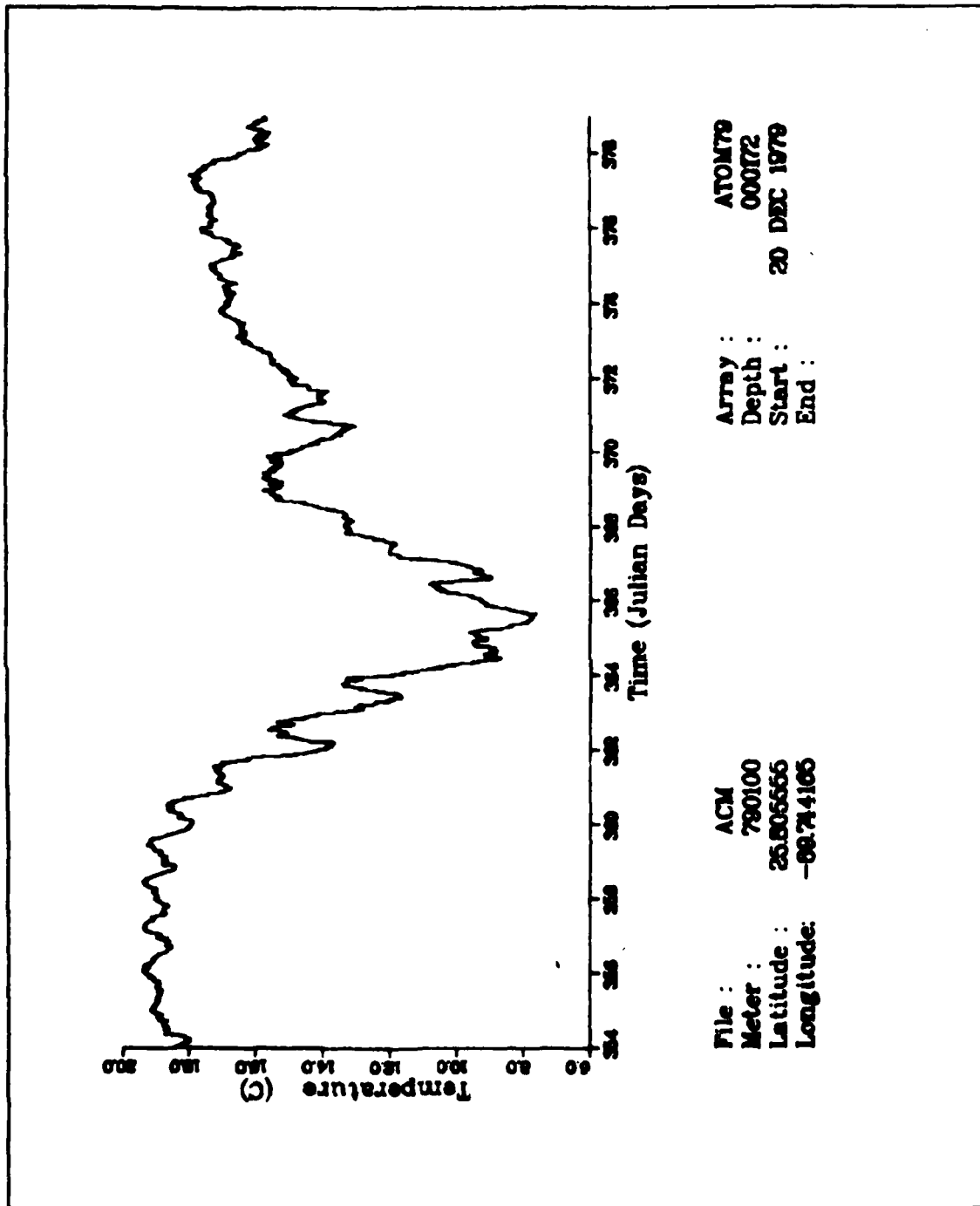


Figure 196.

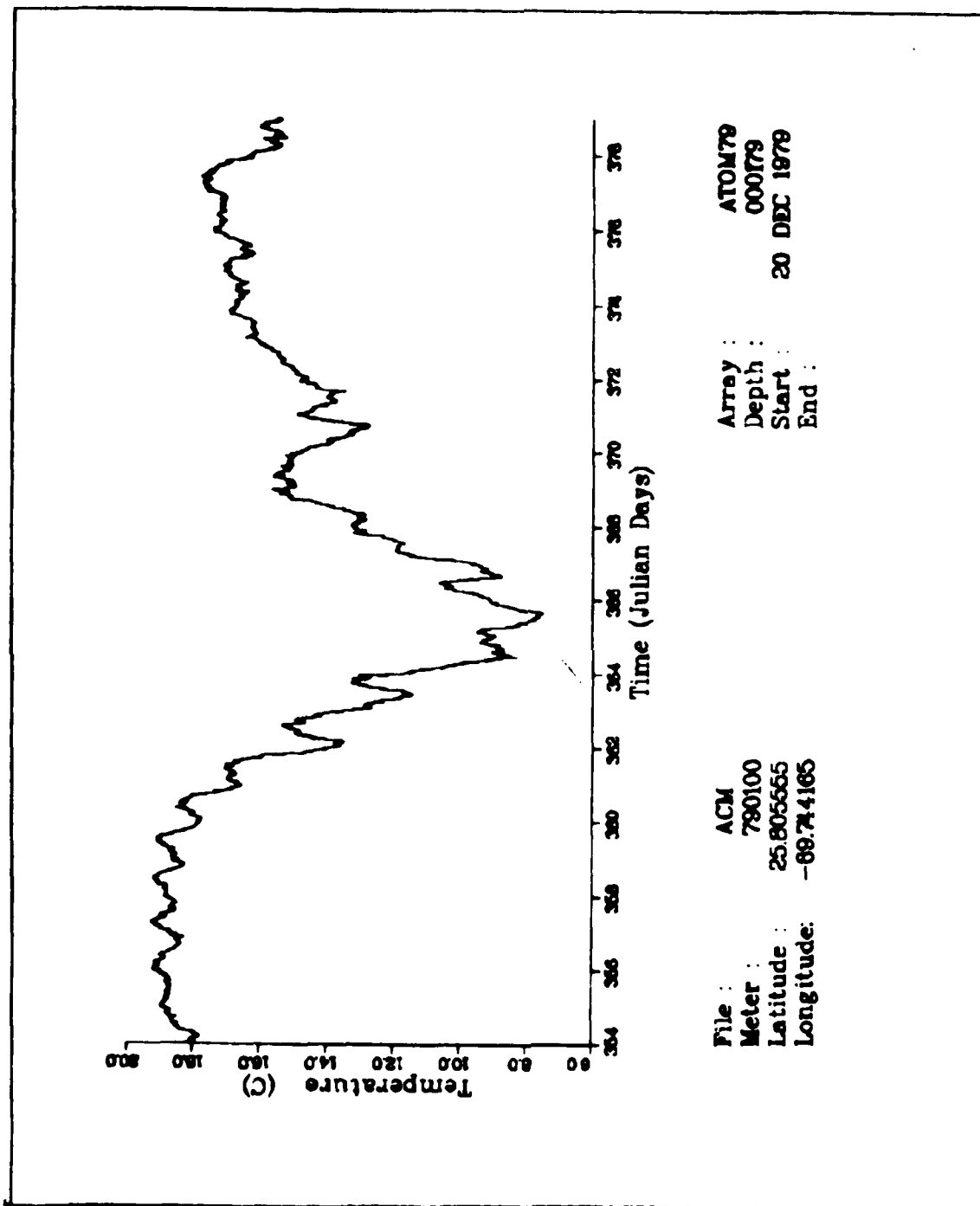


Figure 197.

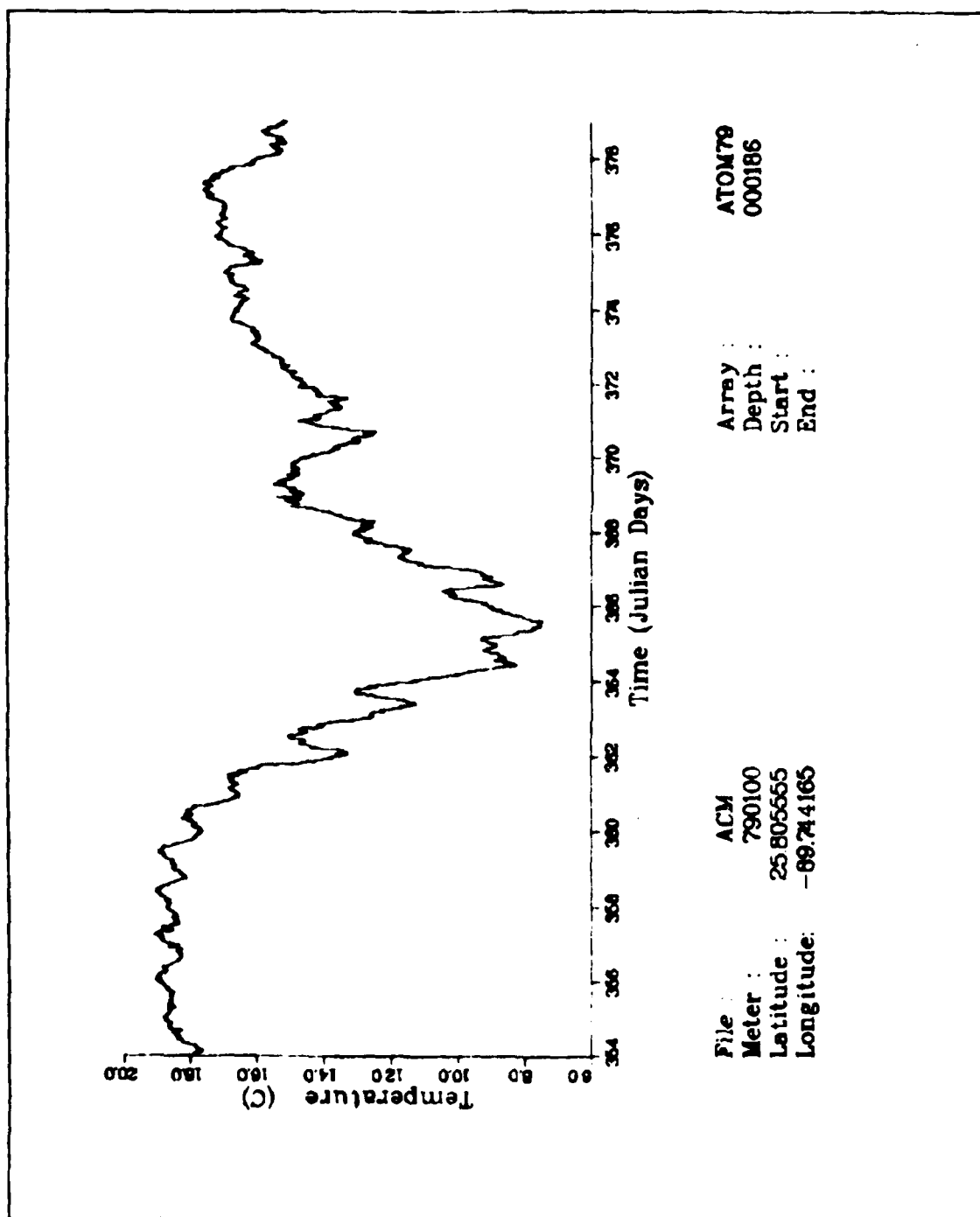


Figure 198.

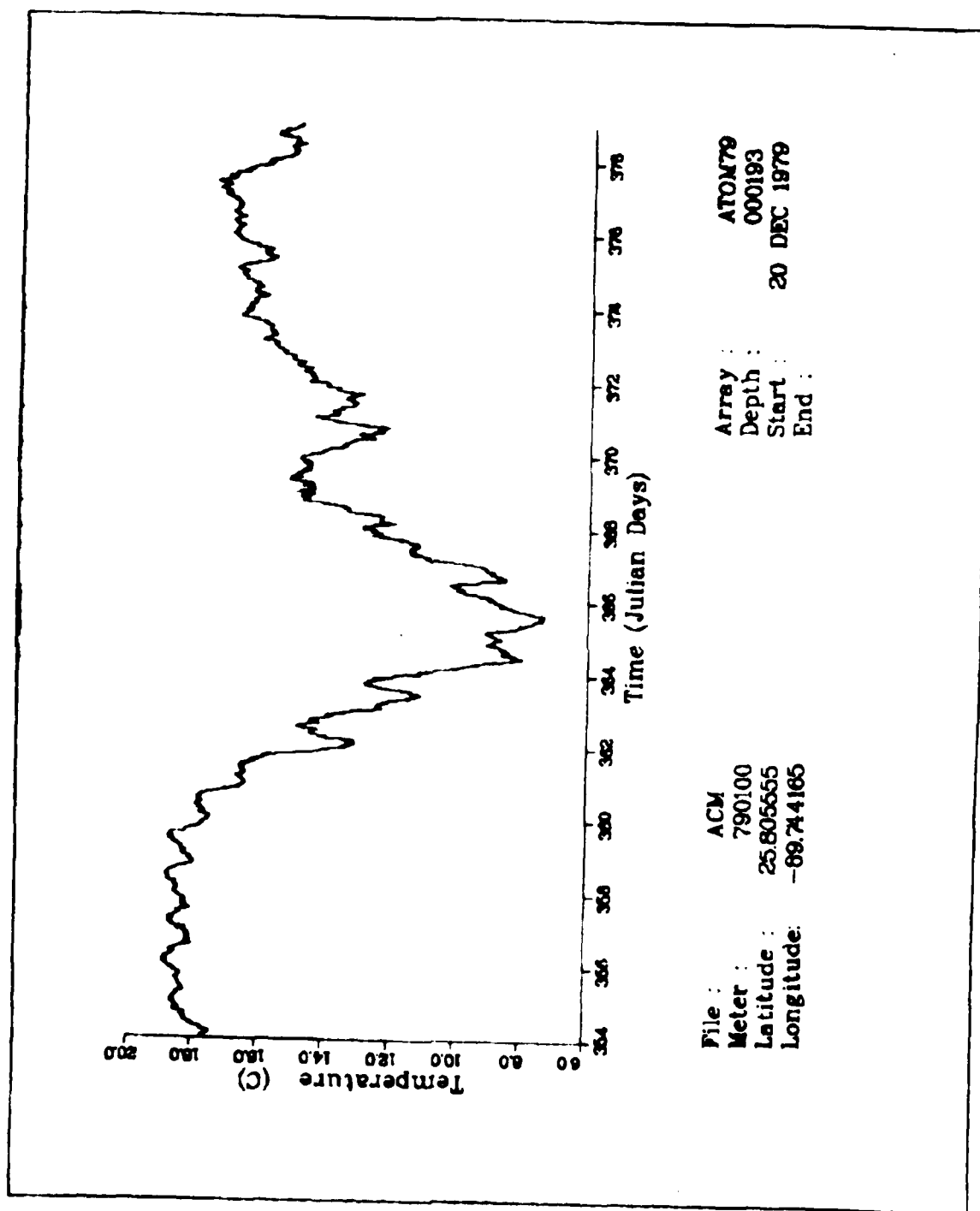


Figure 199.

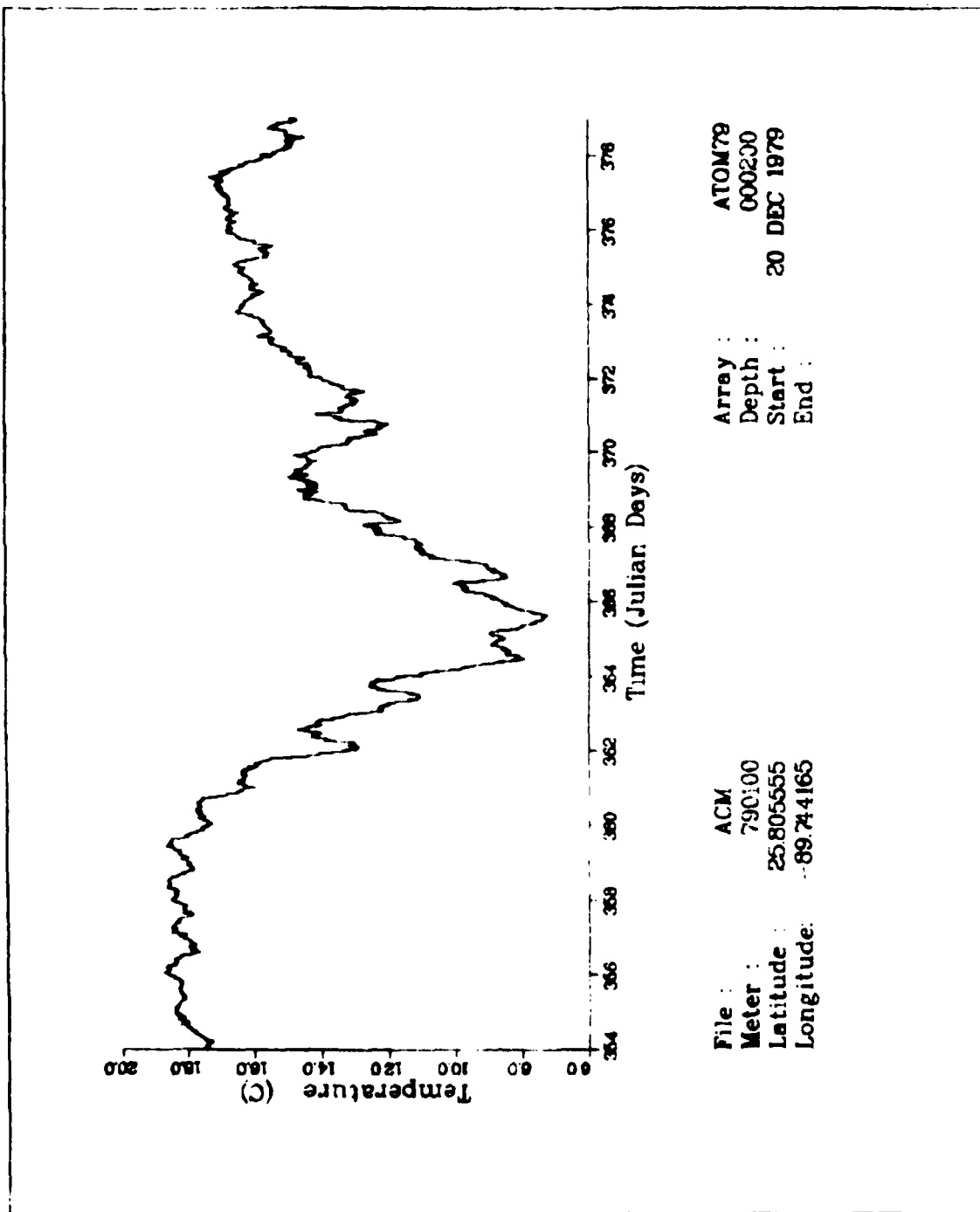


Figure 200.

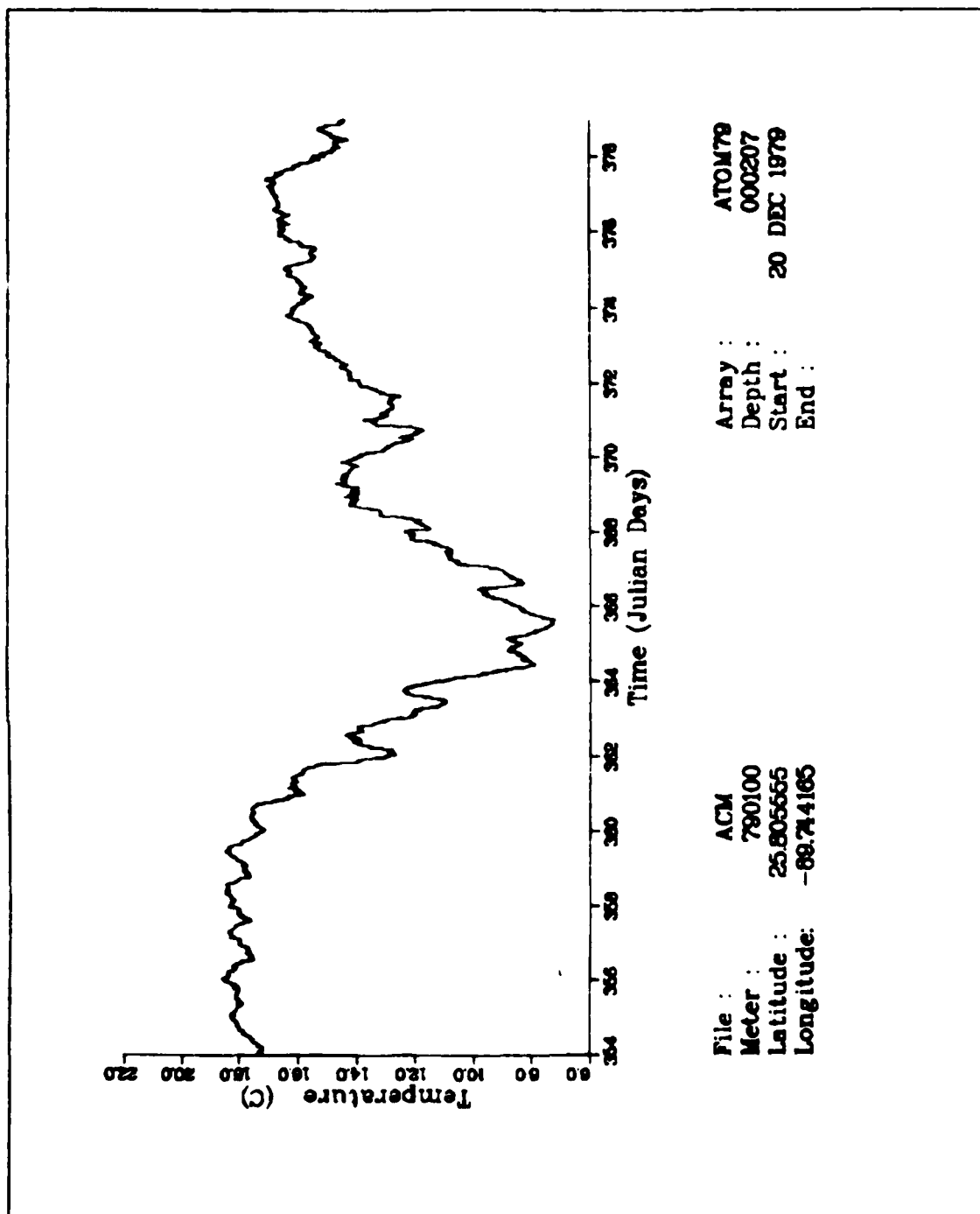
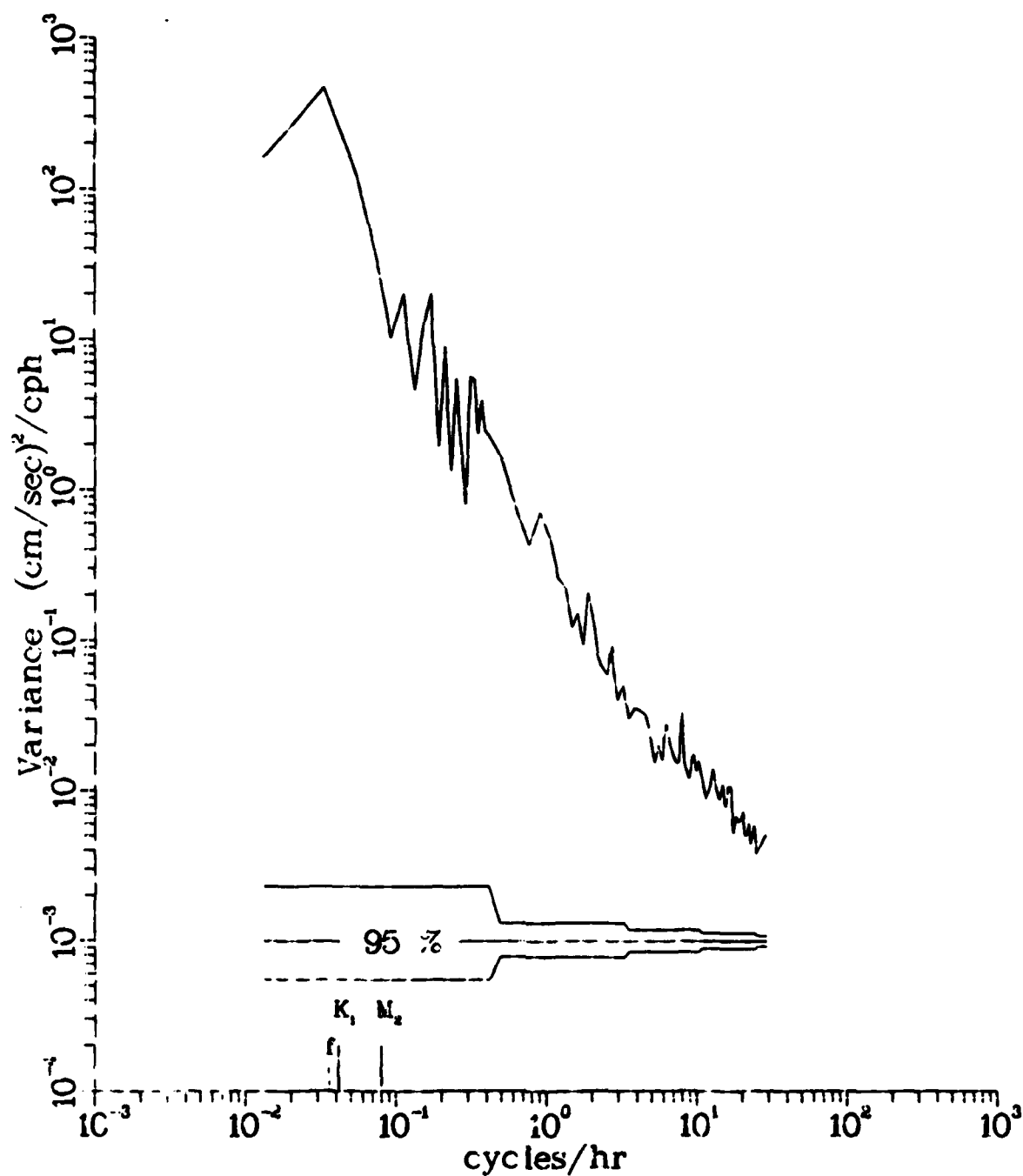


Figure 201.

CURRENT SPECTRUM

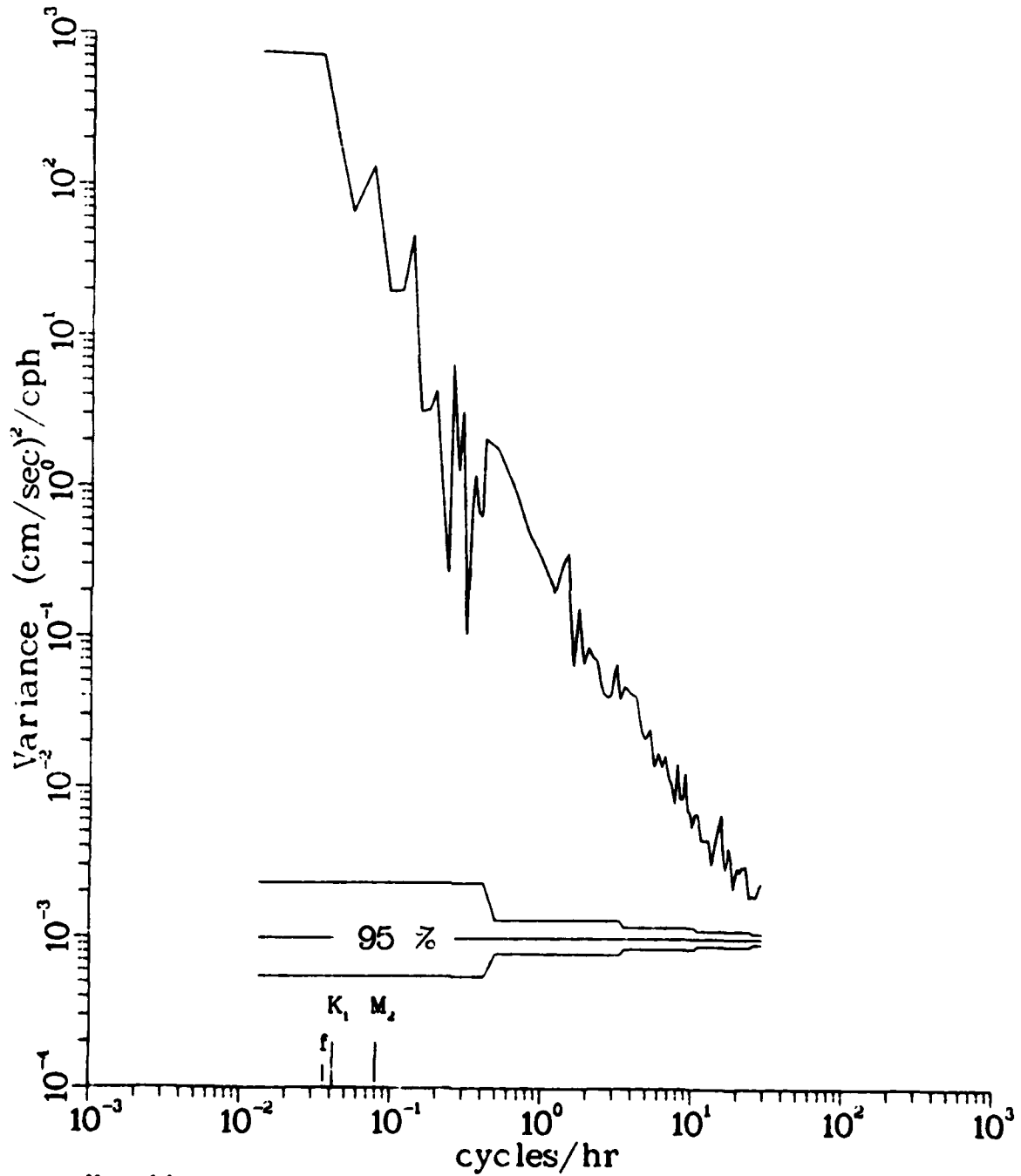


Variable U
File ACM
Meter 790100
Lat 25.803553
Long -89.714165

Array ATOM79
Depth 000123
Start 20 DEC 1979
End 28 DEC 1979

Figure 202.

CURRENT SPECTRUM

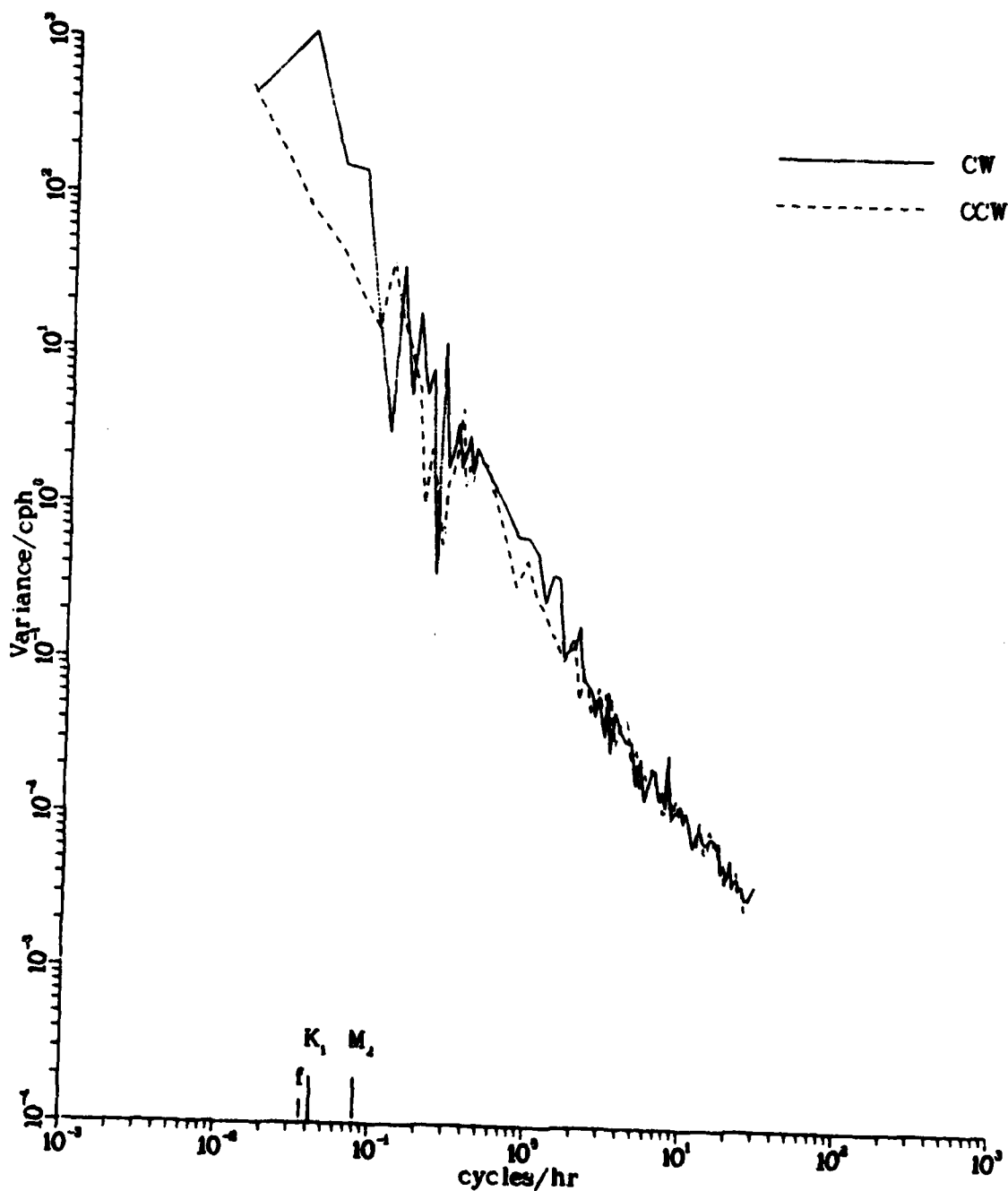


Variable V
File ACM
Meter 790100
Lat 25.805555
Long -89.74165

Array ATOM79
Depth 000123
Start 20 DEC 1979
End 26 DEC 1979

Figure 203.

ROTARY SPECTRUM

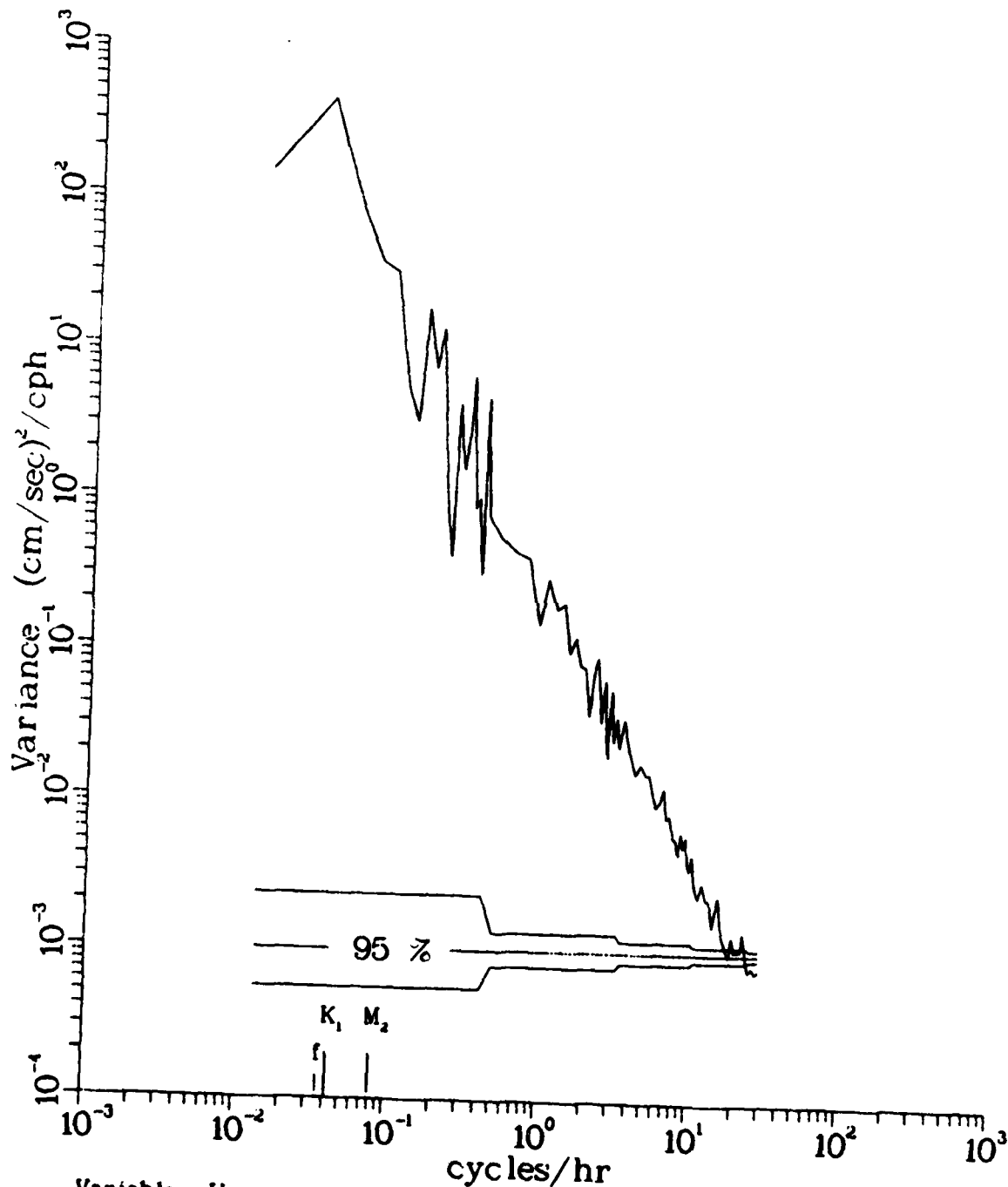


Variable U
 Depth 000123
 Meter 790100
 Lat. 25.805555
 Long -89.714165

Variable V
 Depth 000123
 Meter 790100
 Lat. 25.805555
 Long -89.714165

Figure 204.

CURRENT SPECTRUM

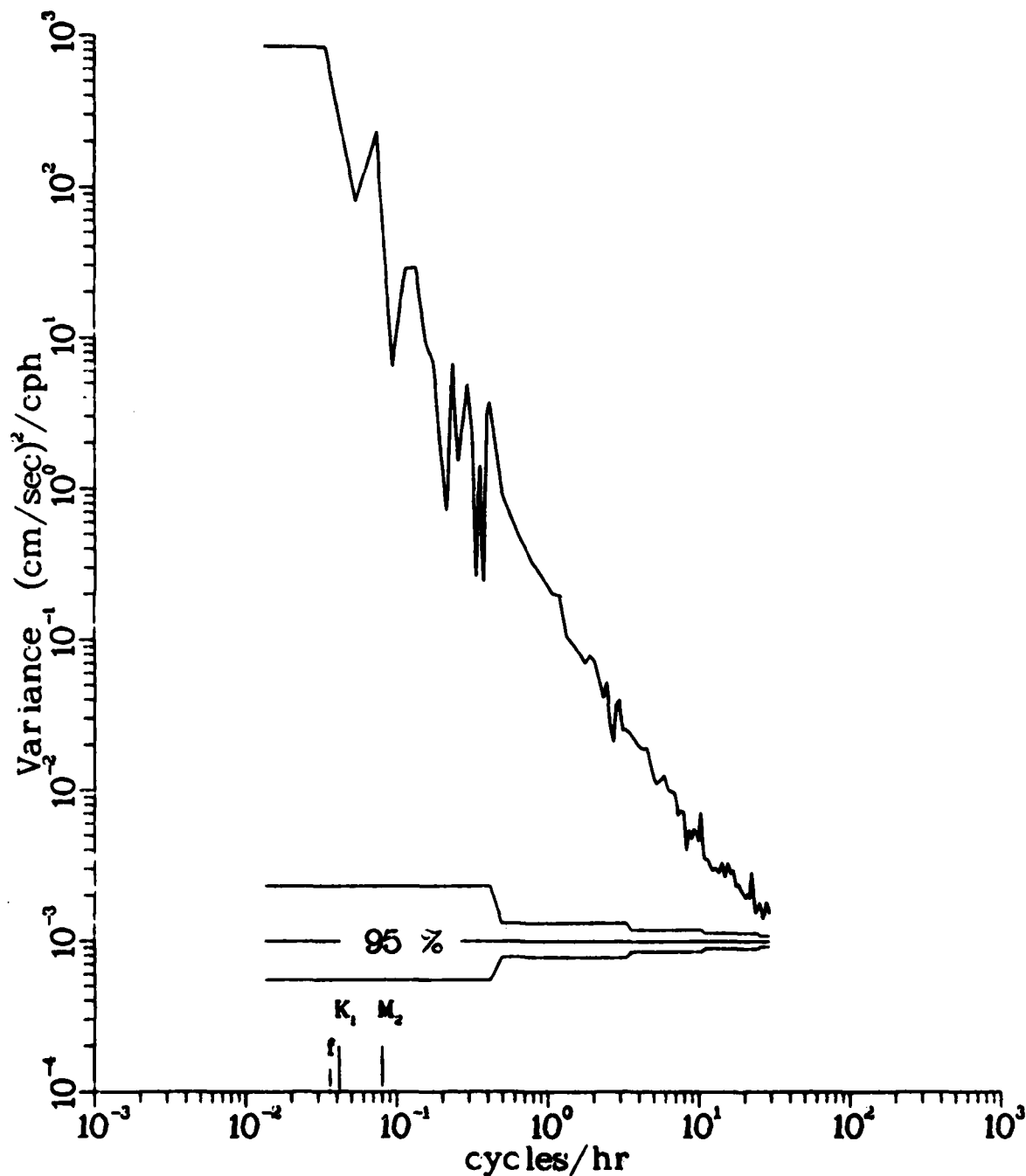


Variable U
File ACM
Meter 790100
Lat 25.805355
Long -89.74165

Array ATOM79
Depth 000130
Start 20 DEC 1979
End 26 DEC 1979

Figure 205.

CURRENT SPECTRUM

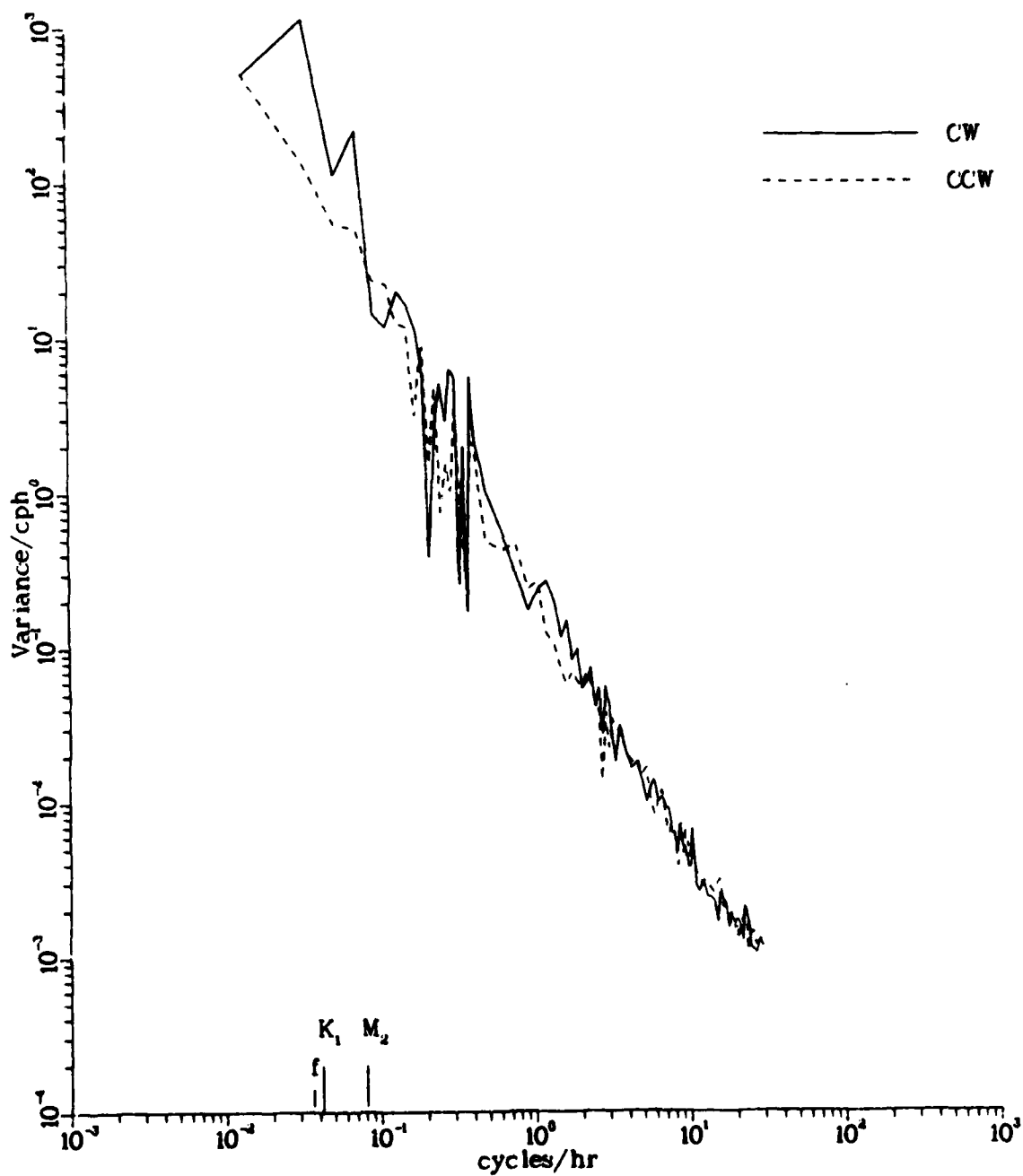


Variable V
File ACM
Meter 780100
Lat. 25.805555
Long -89.74165

Array ATOM79
Depth : 000130
Start 20 DEC 1979
End 26 DEC 1979

Figure 206.

ROTARY SPECTRUM

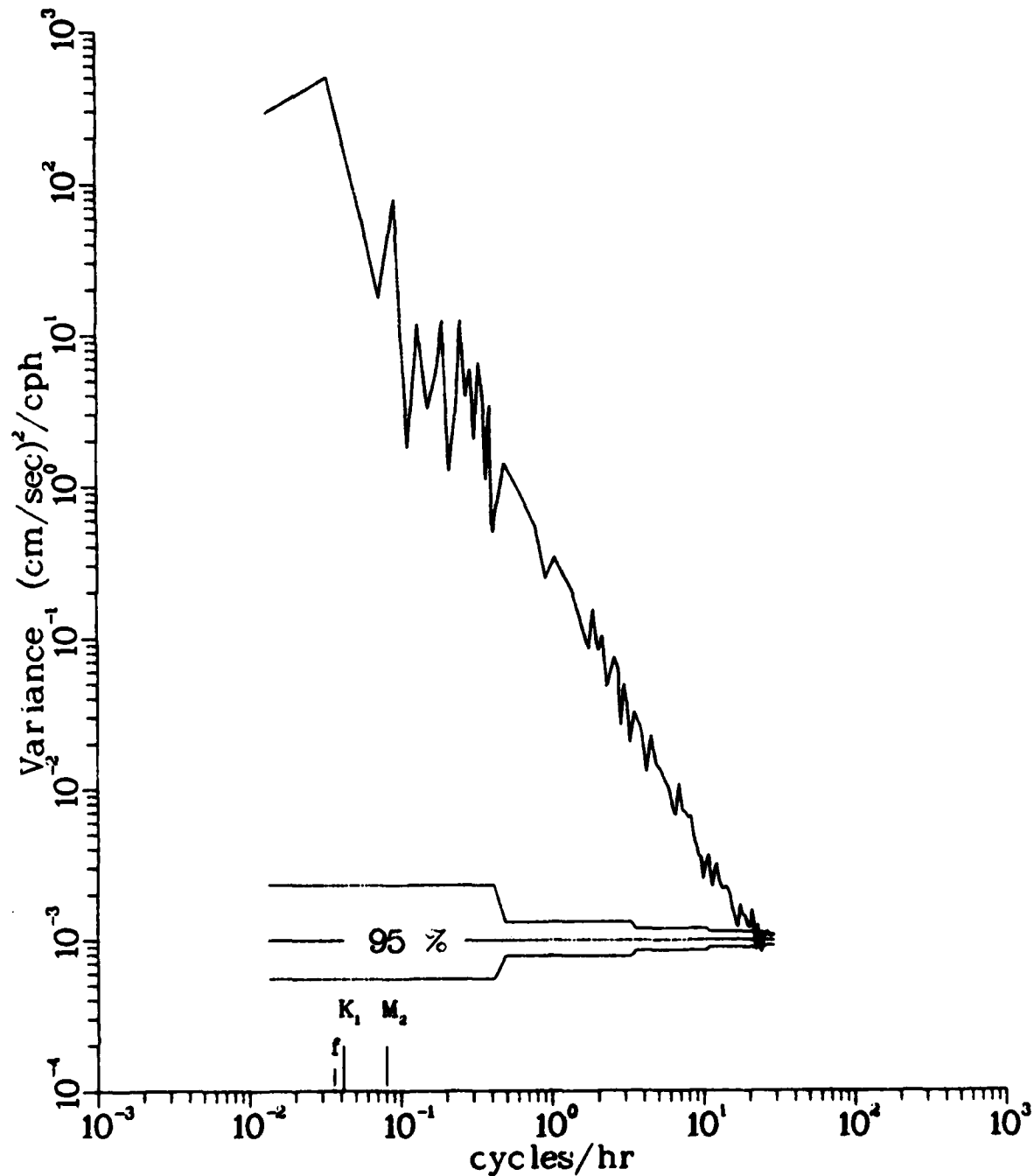


Variable U
 Depth 000130
 Meter 790100
 Lat 25.805553
 Long -89.744165

Variable V
 Depth 000130
 Meter 790100
 Lat 25.805555
 Long -89.744165

Figure 207.

CURRENT SPECTRUM

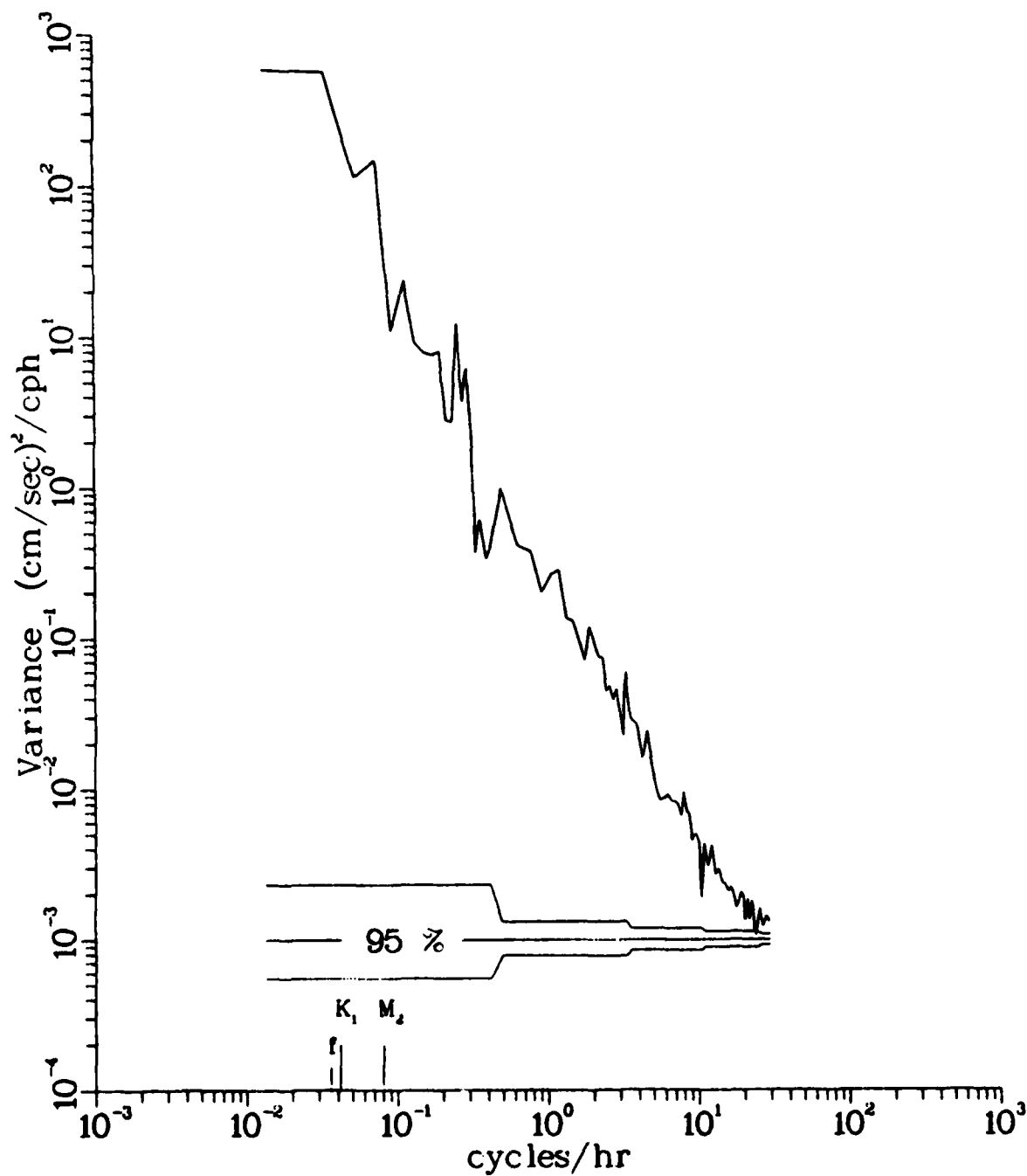


Variable : U
File : ACM
Meter : 790100
Lat : 25.805555
Long : -89.74165

Array : ATOM79
Depth : 000137
Start : 20 DEC 1979
End : 26 DEC 1979

Figure 208.

CURRENT SPECTRUM

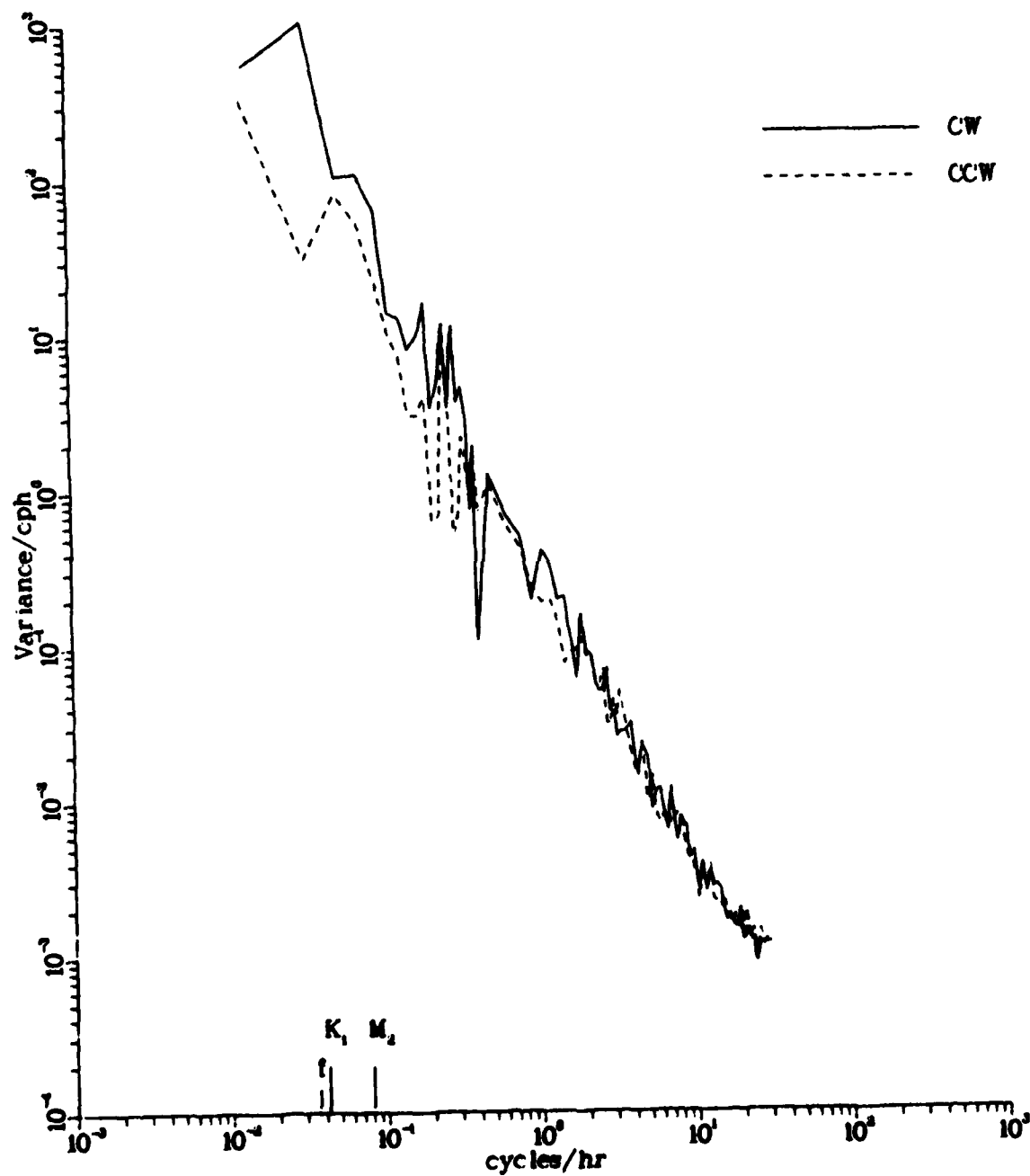


Variable V
 File ACM
 Meter 790100
 Lat. 25.805555
 Long -89.744165

Array ATOM79
 Depth 000137
 Start 20 DEC 1979
 End 26 DEC 1979

Figure 209.

ROTARY SPECTRUM



Variable U
 Depth 000137
 Meter 790100
 Lat. 25.805555
 Long -89.714165

Variable V
 Depth 000137
 Meter 790100
 Lat. 25.805555
 Long -89.714165

Figure 210.

CURRENT SPECTRUM

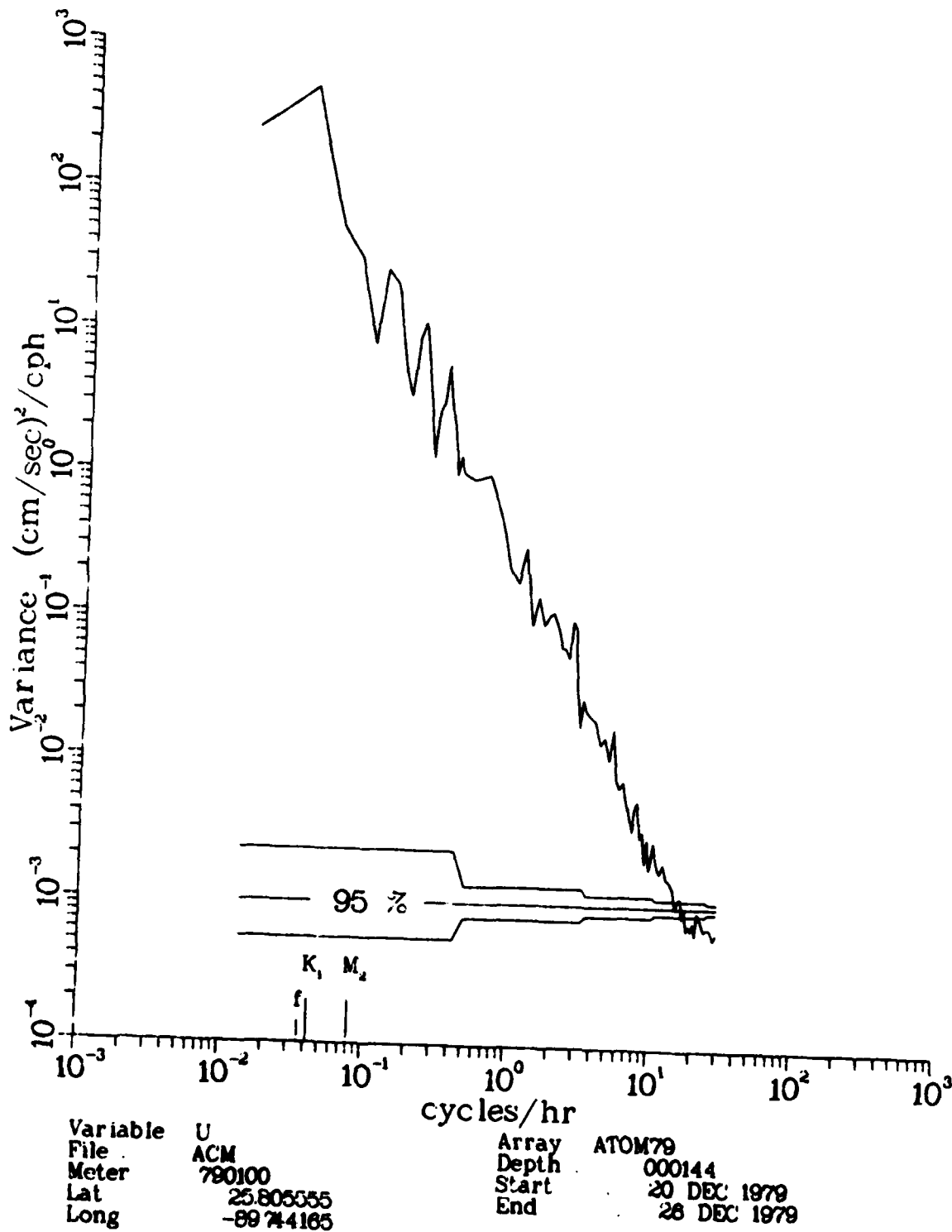
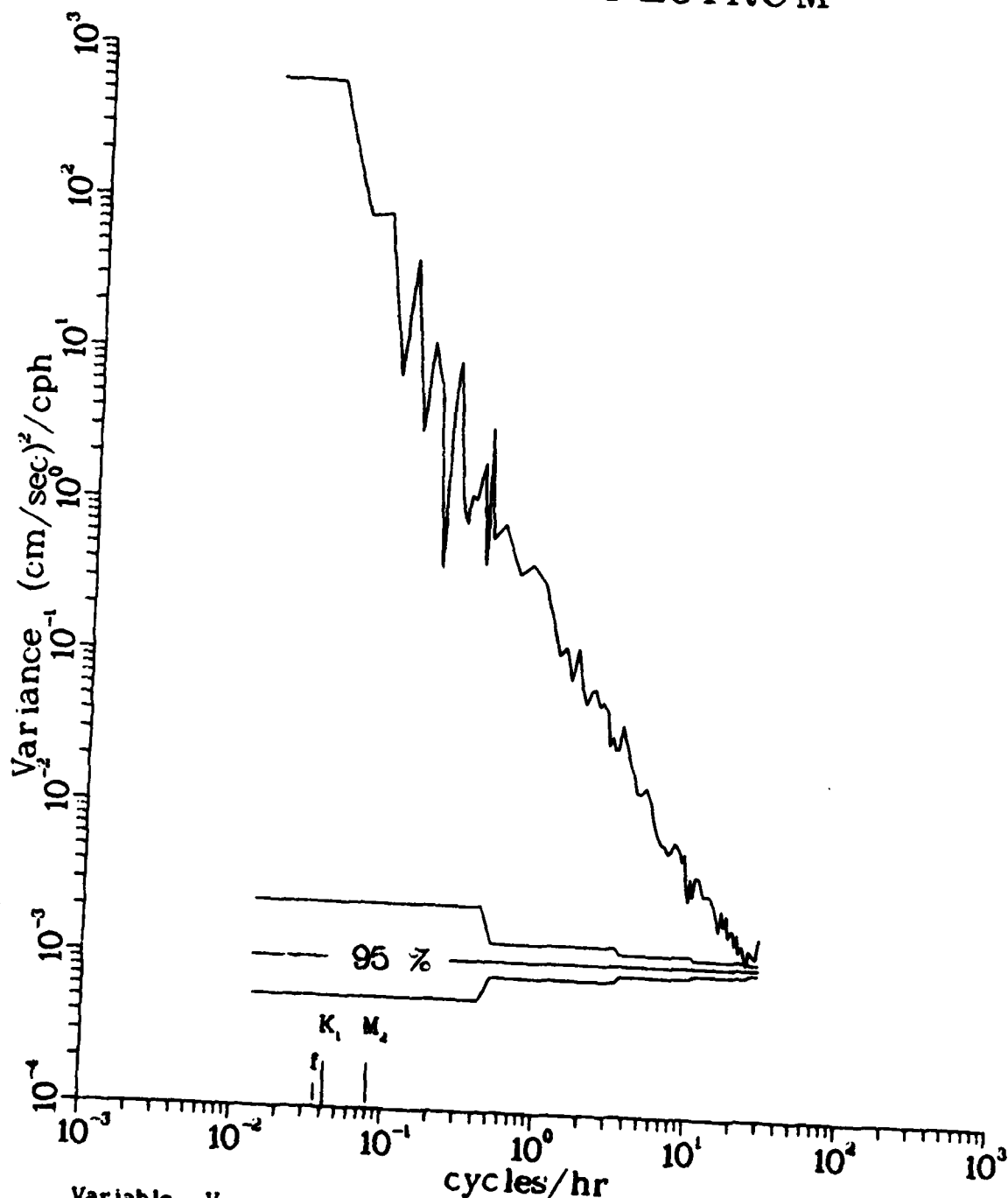


Figure 211.

CURRENT SPECTRUM

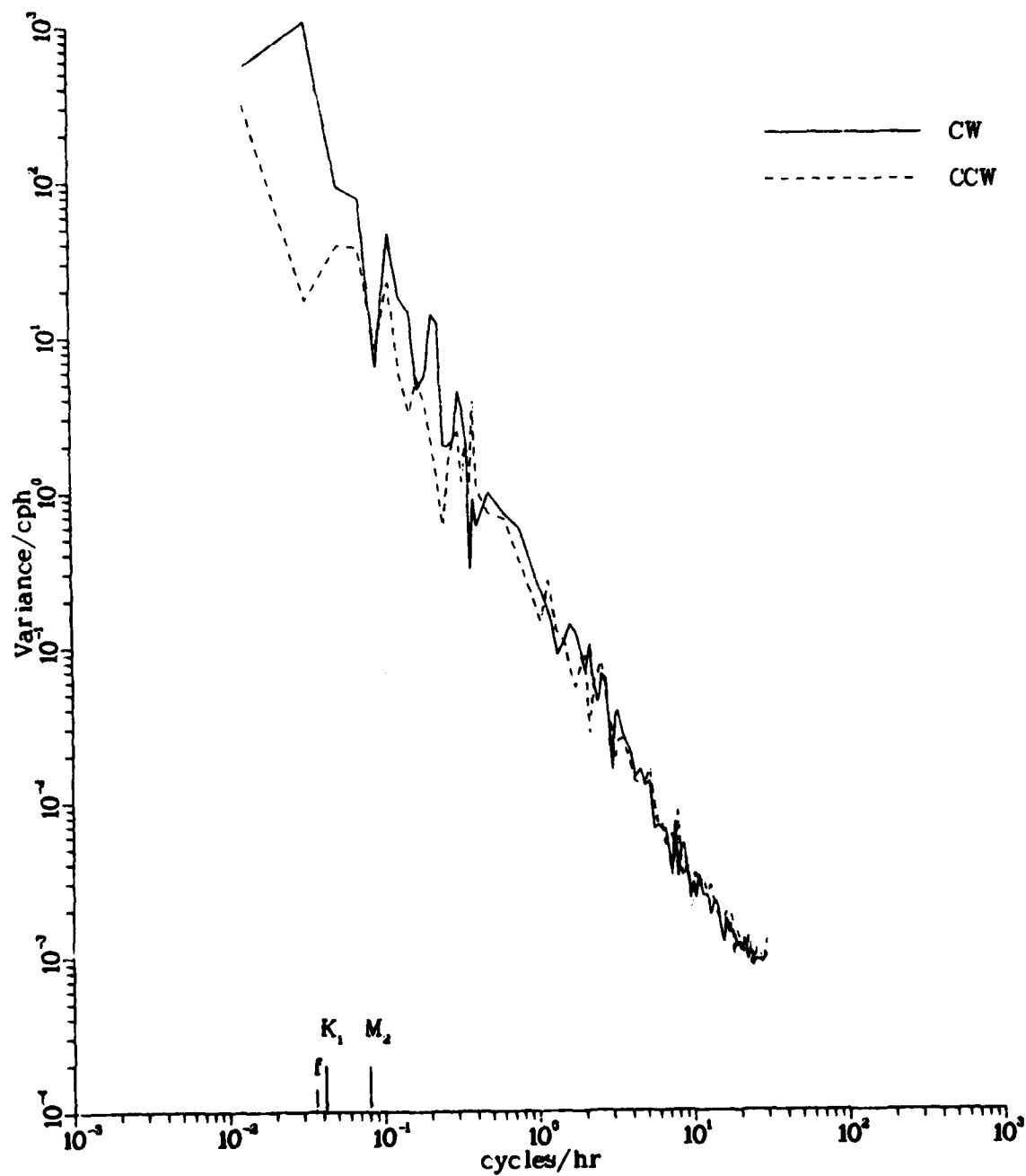


Variable V
File ACM
Meter 790100
Lat. 25.805555
Long -89.74165

Array ATOM79
Depth 000144
Start 20 DEC 1979
End 26 DEC 1979

Figure 212.

ROTARY SPECTRUM



Variable . U
 Depth . 000144
 Meter . 790100
 Lat . 25.805555
 Long . -89.74165

Variable . V
 Depth . 000144
 Meter . 790100
 Lat . 25.805555
 Long . -89.74165

Figure 213.

CURRENT SPECTRUM

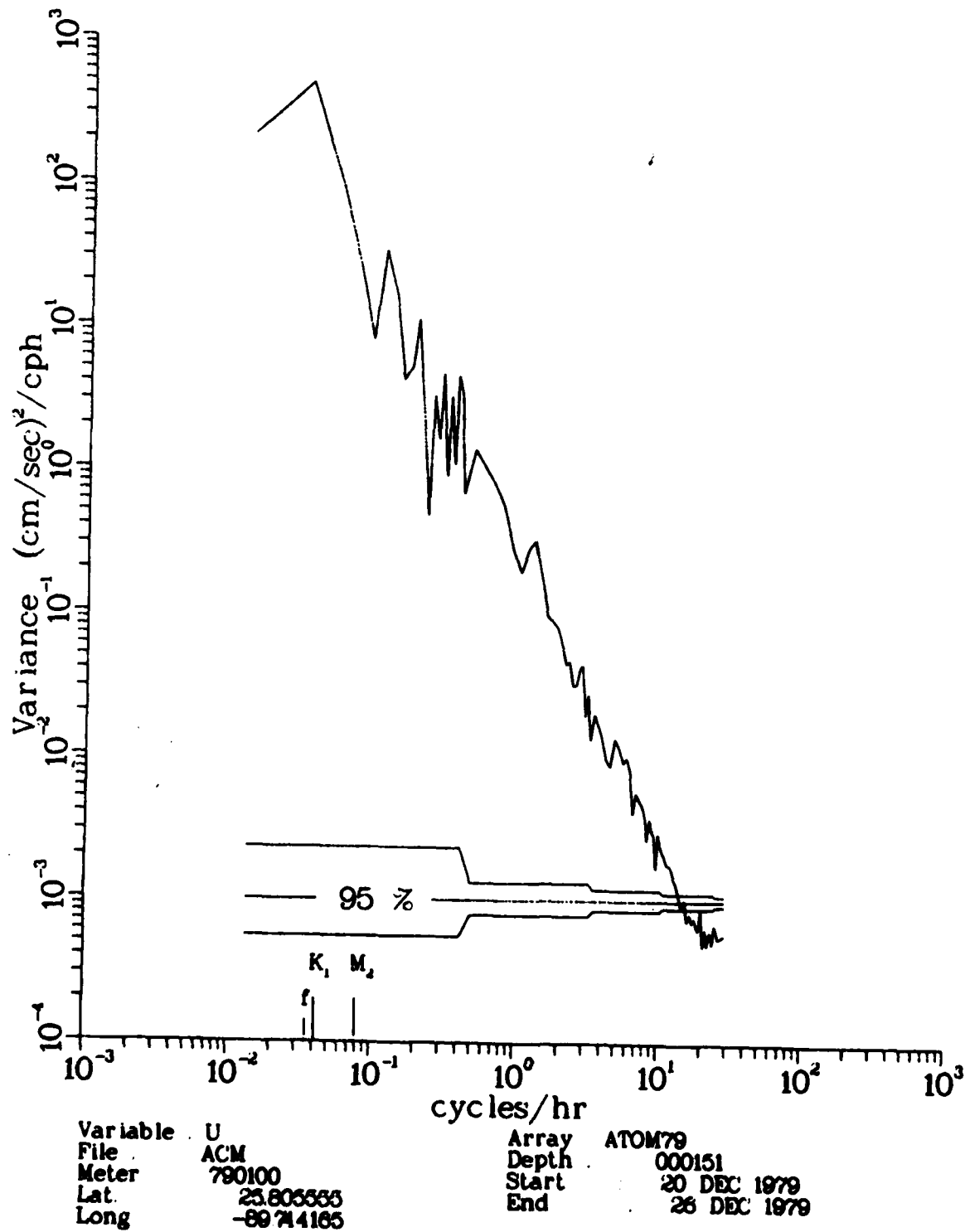
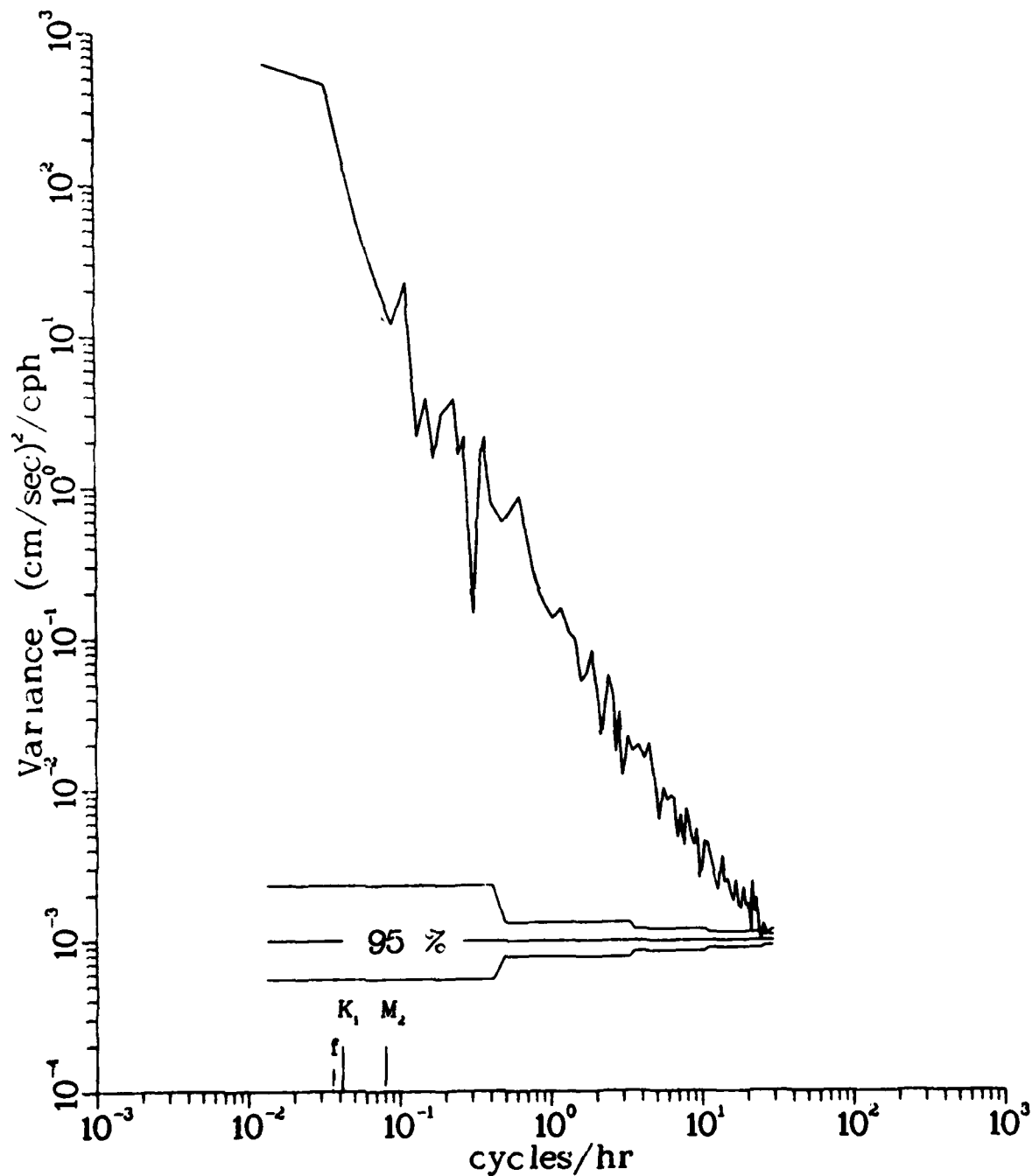


Figure 214.

CURRENT SPECTRUM

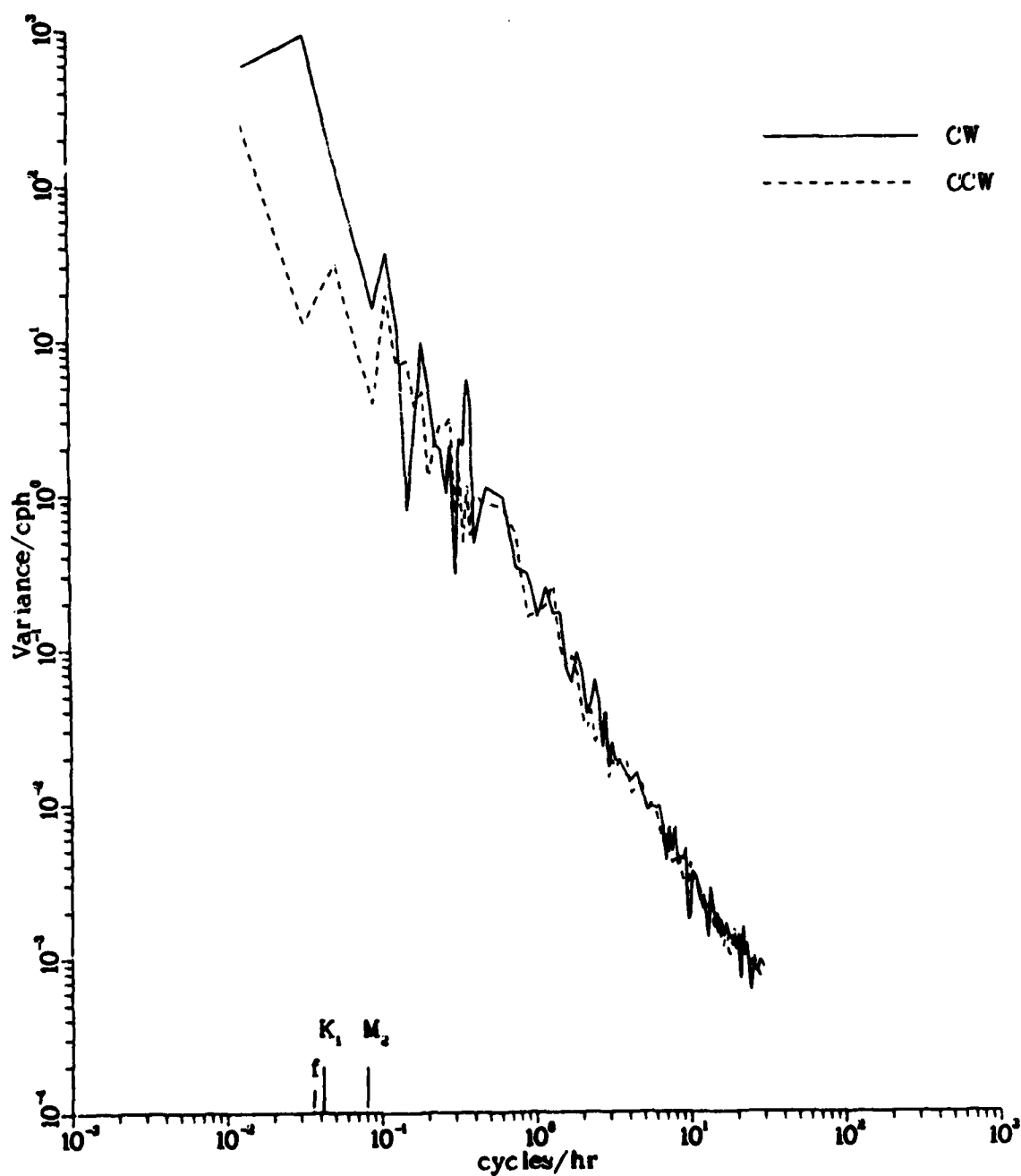


Variable V
 File ACM
 Meter 790100
 Lat. 25.805555
 Long -89.74165

Array ATOM79
 Depth 000151
 Start 20 DEC 1979
 End 26 DEC 1979

Figure 215.

ROTARY SPECTRUM



Variable U
 Depth 000151
 Meter 790100
 Lat 25.805555
 Long -89.74165

Variable V
 Depth 000151
 Meter 790100
 Lat 25.805555
 Long -89.74165

Figure 216.

CURRENT SPECTRUM

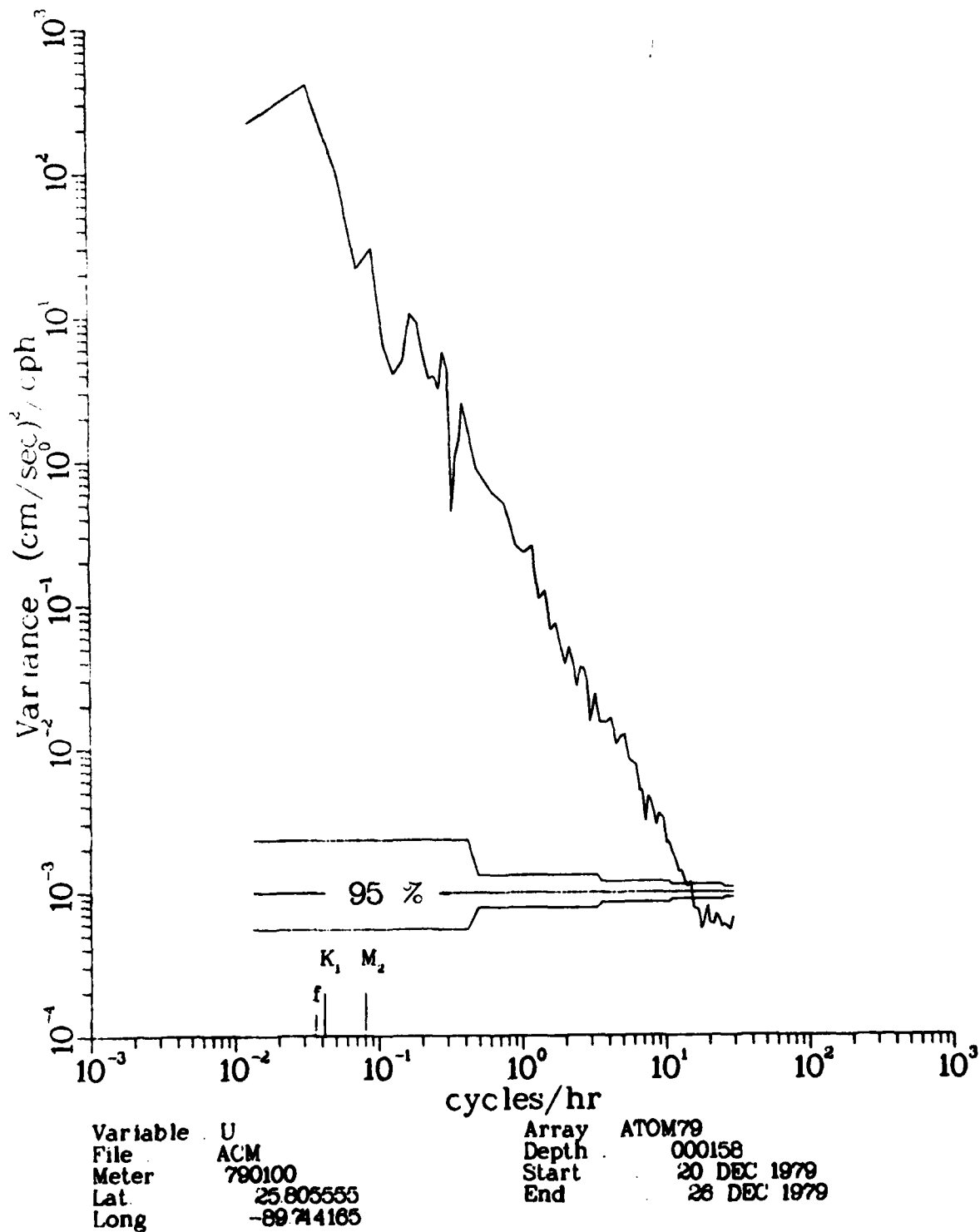


Figure 217.

CURRENT SPECTRUM

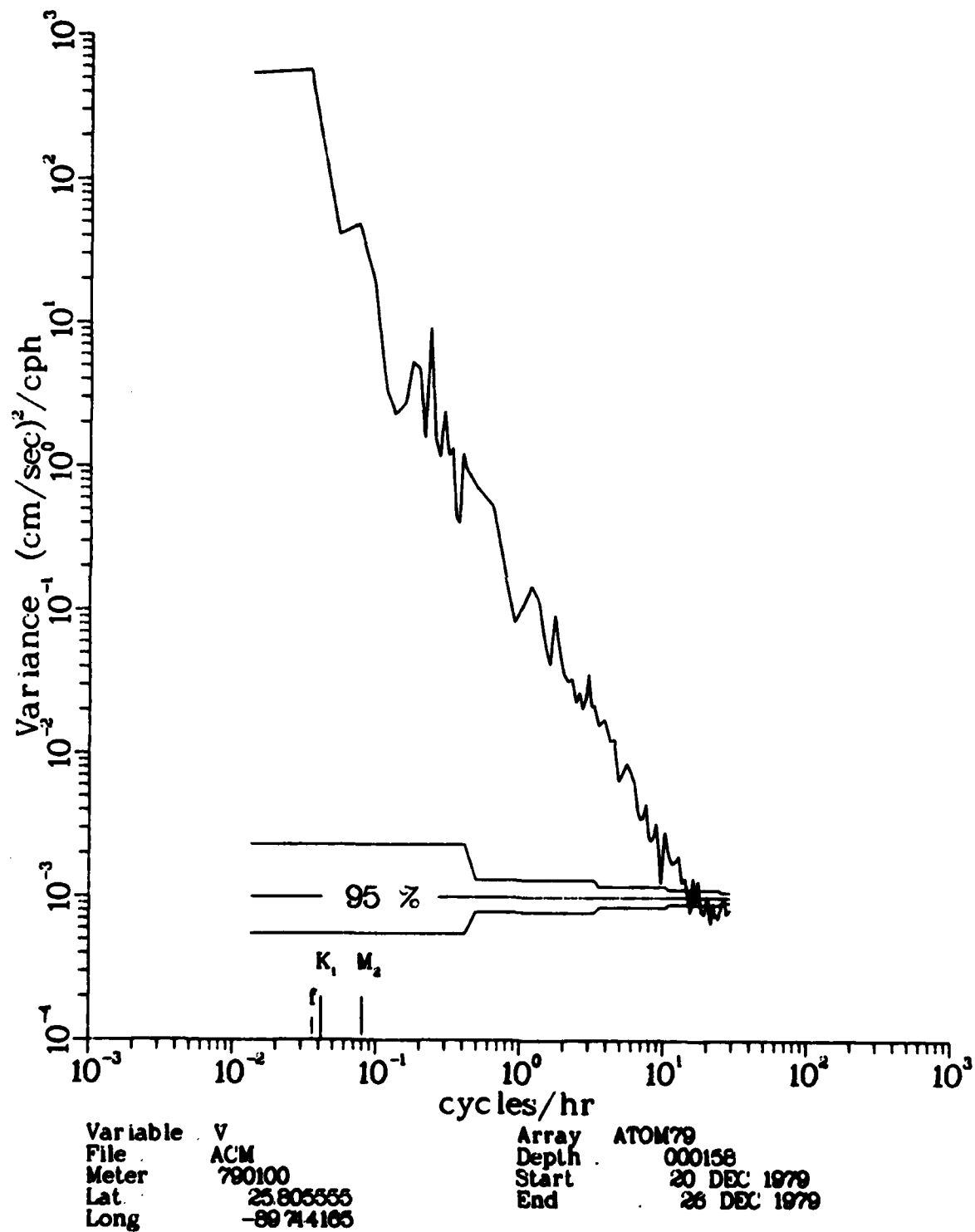


Figure 218.

ROTARY SPECTRUM

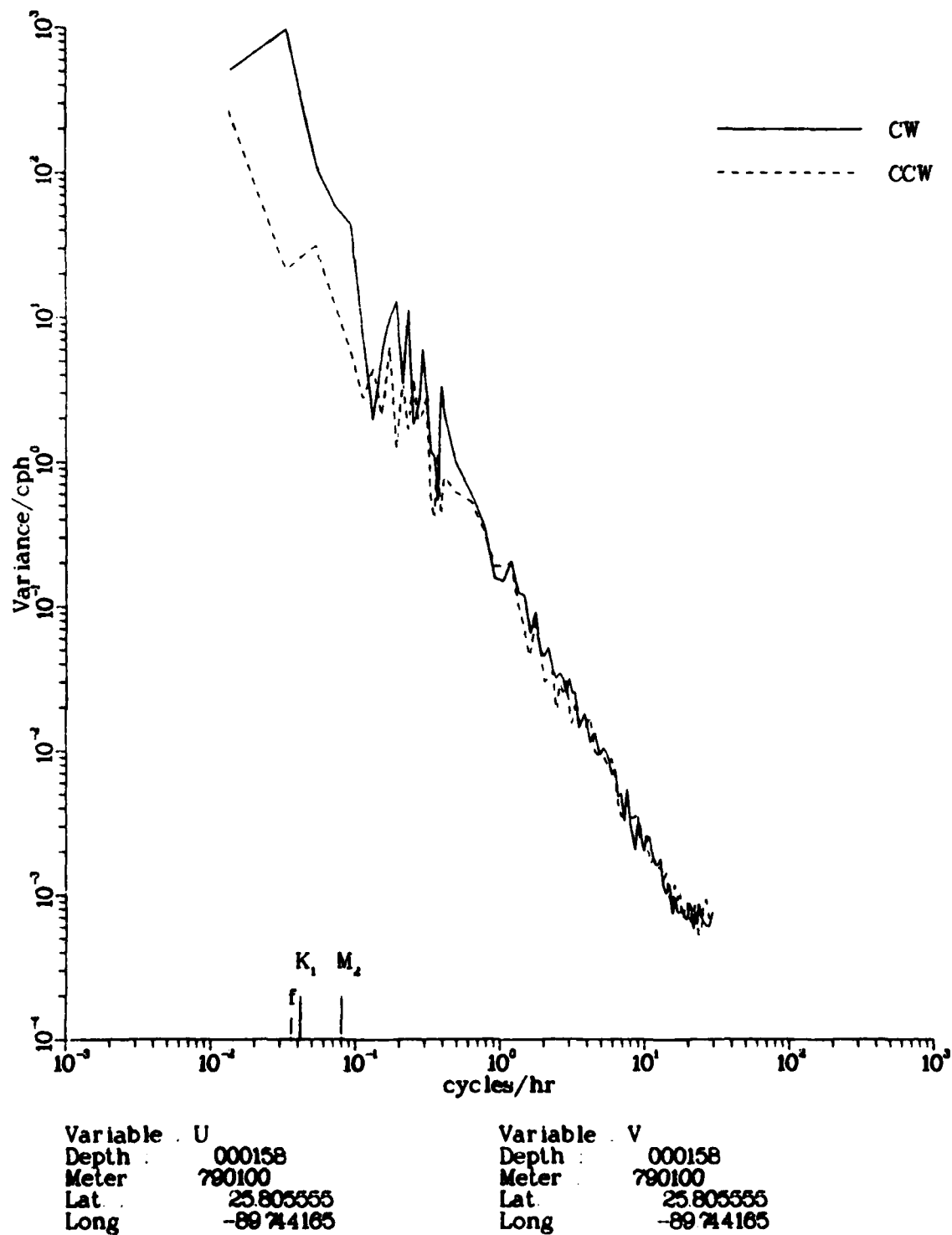


Figure 219.

CURRENT SPECTRUM

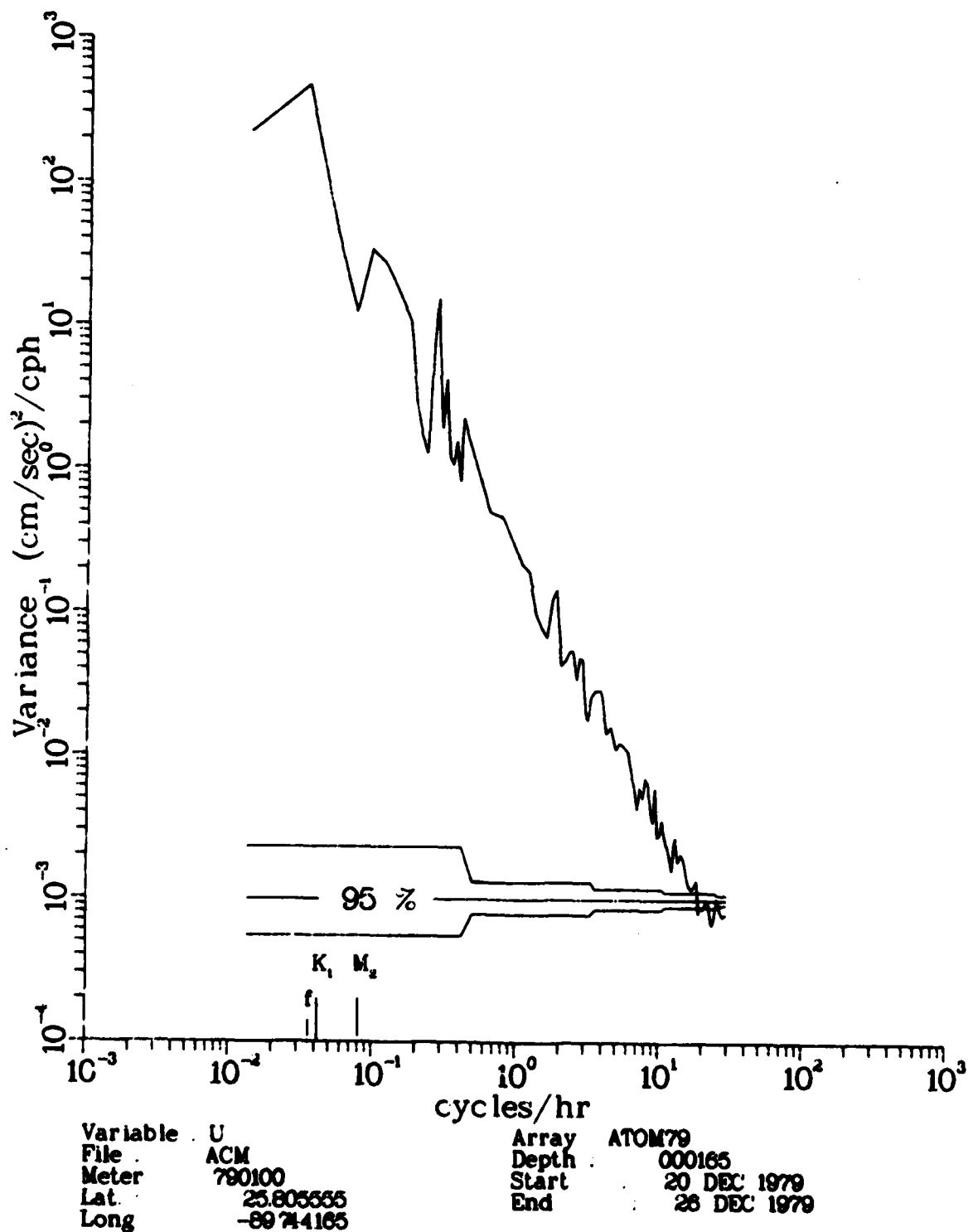
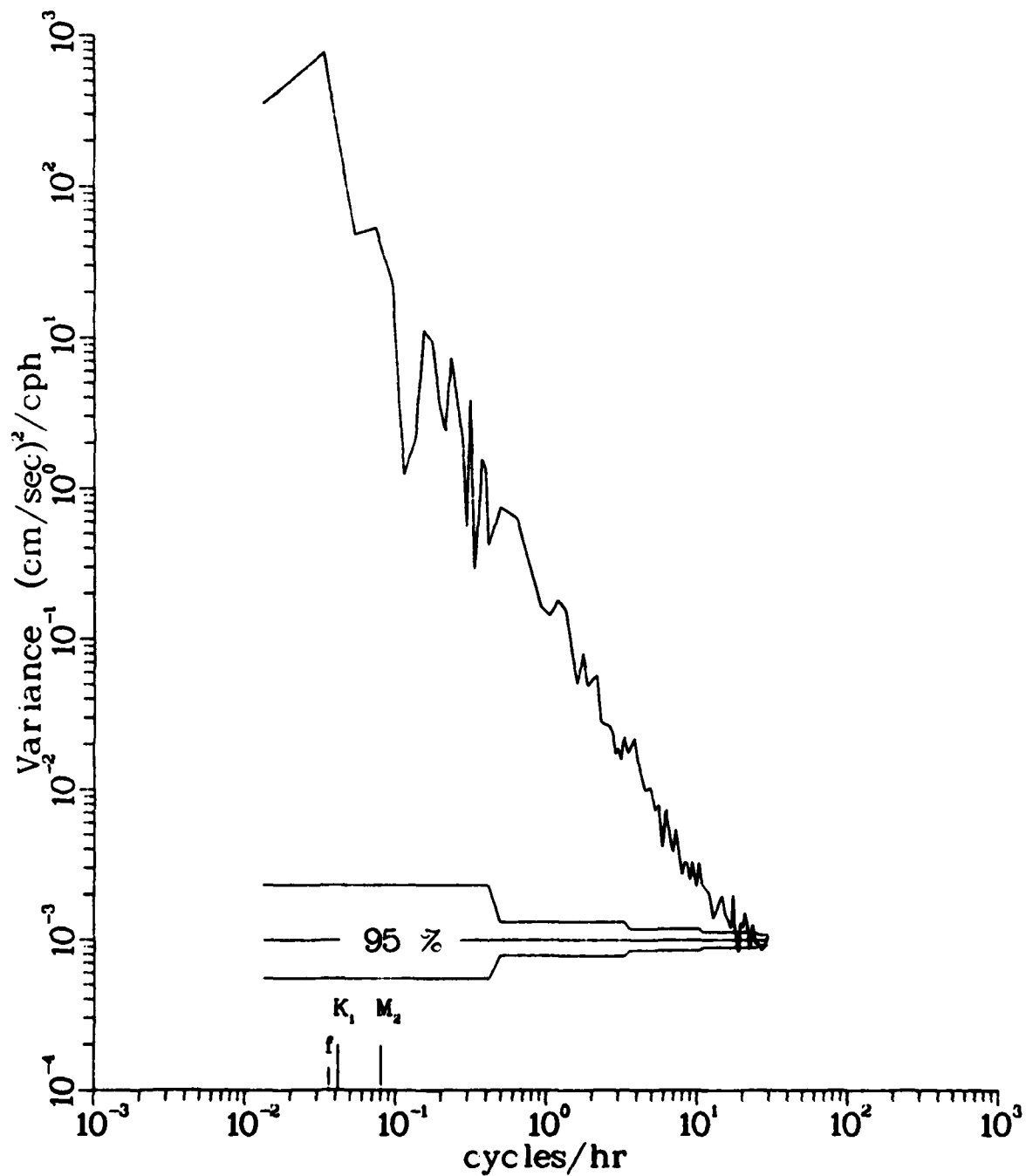


Figure 220.

CURRENT SPECTRUM

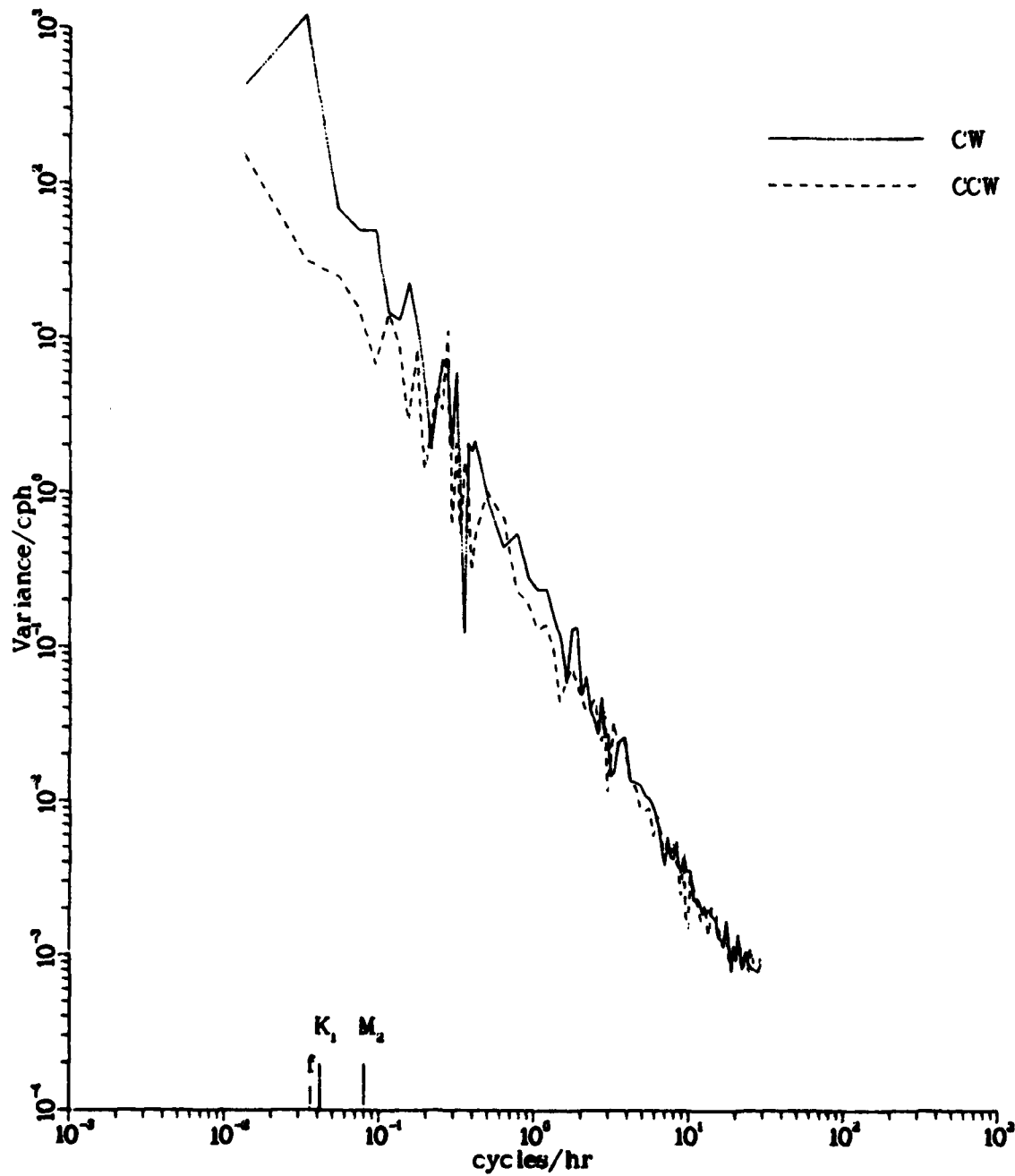


Variable V
File ACM
Meter 790100
Lat. 25.805555
Long -89.74165

Array ATOM79
Depth 000165
Start 20 DEC 1979
End 26 DEC 1979

Figure 221.

ROTARY SPECTRUM

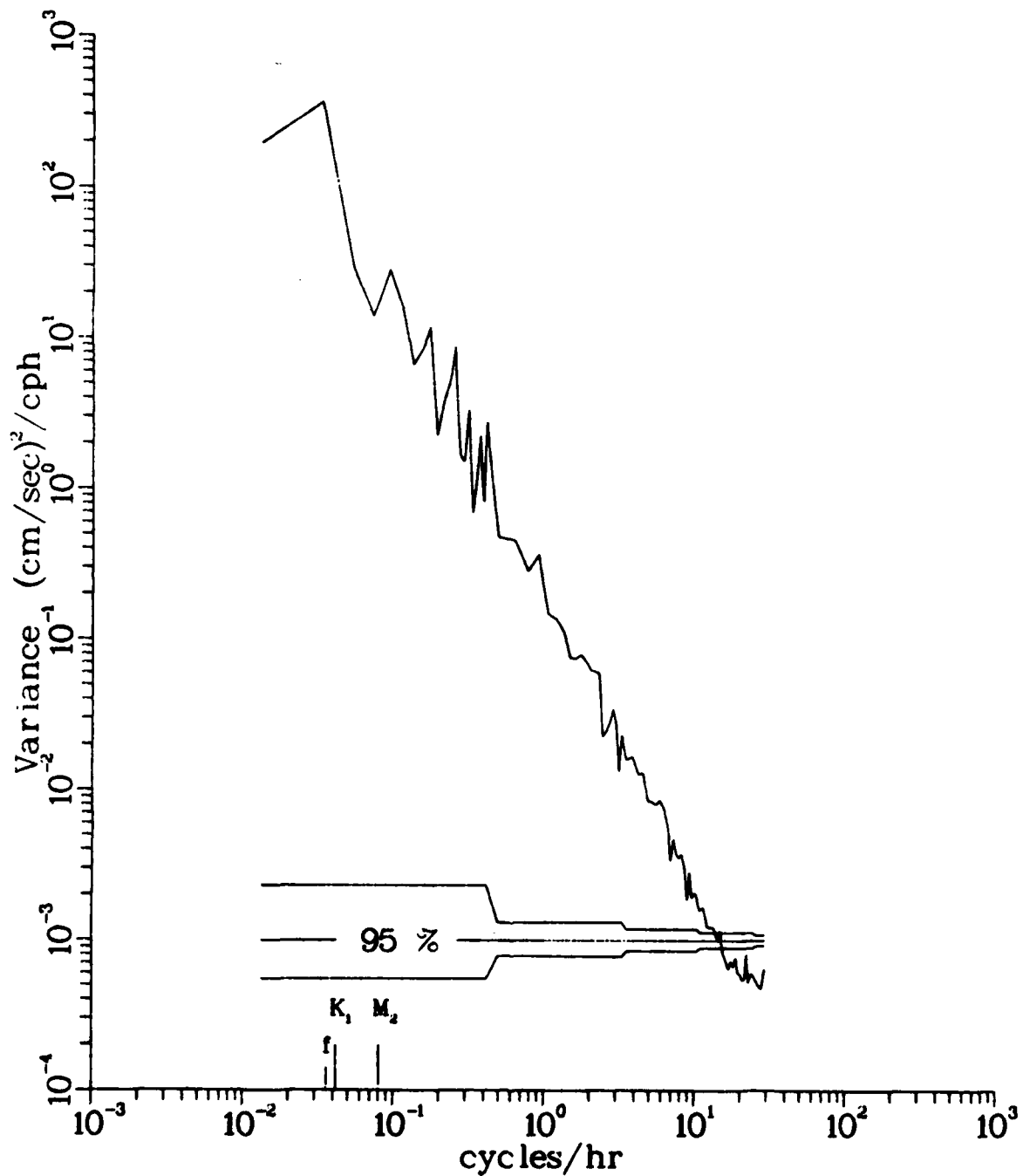


Variable . U
 Depth . 000165
 Meter 790100
 Lat. 25.805555
 Long -89.744165

Variable . V
 Depth . 000165
 Meter 790100
 Lat. 25.805555
 Long -89.744165

Figure 222.

CURRENT SPECTRUM

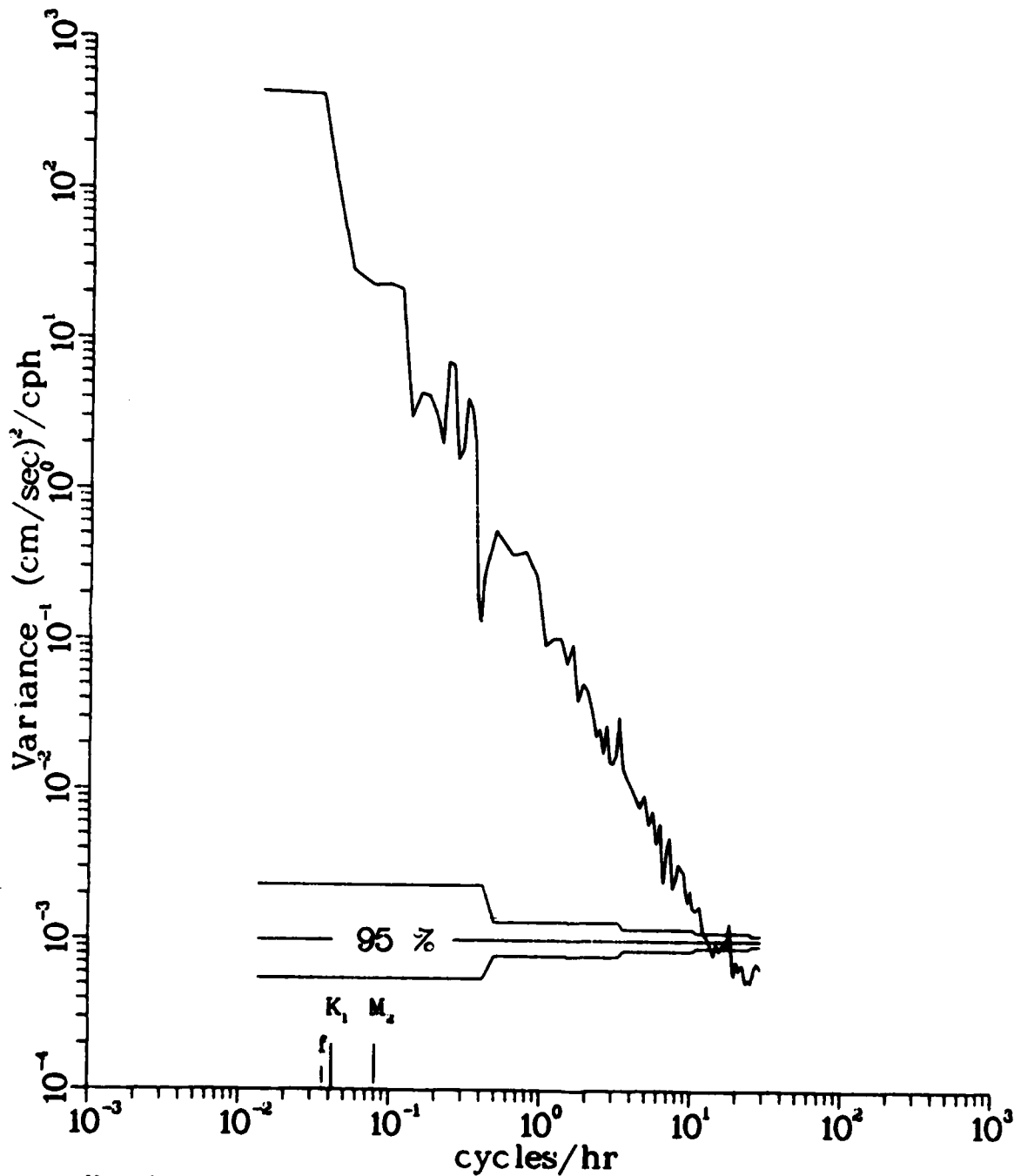


Variable : U
File : ACM
Meter : 790100
Lat. : 25.805555
Long : -89.74165

Array : ATOM79
Depth : 000172
Start : 20 DEC 1979
End : 26 DEC 1979

Figure 223.

CURRENT SPECTRUM

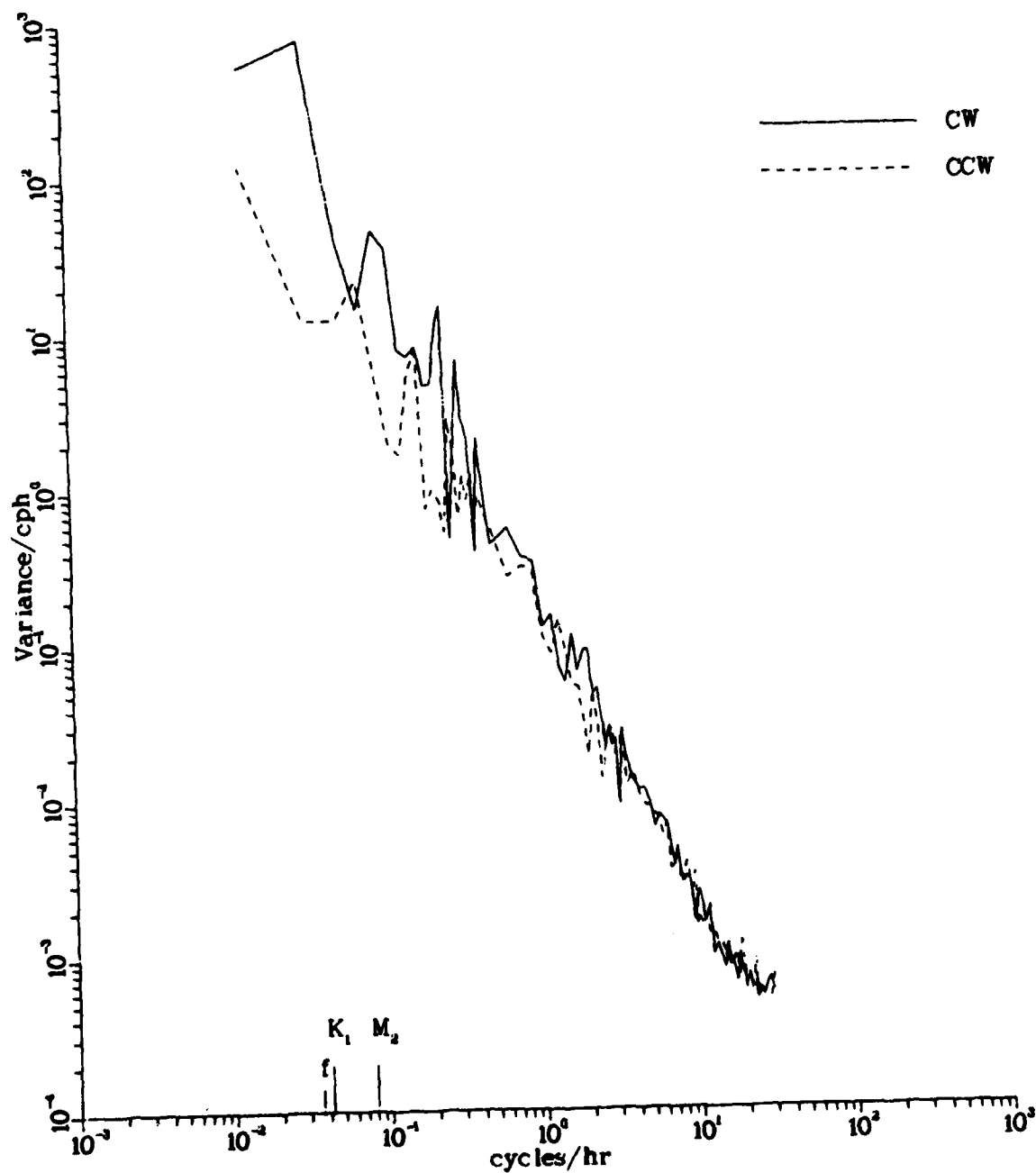


Variable : V
 File : ACM
 Meter : 790100
 Lat : 25.805555
 Long : -89.744165

Array : ATOM79
 Depth : 000172
 Start : 20 DEC 1979
 End : 28 DEC 1979

Figure 224.

ROTARY SPECTRUM

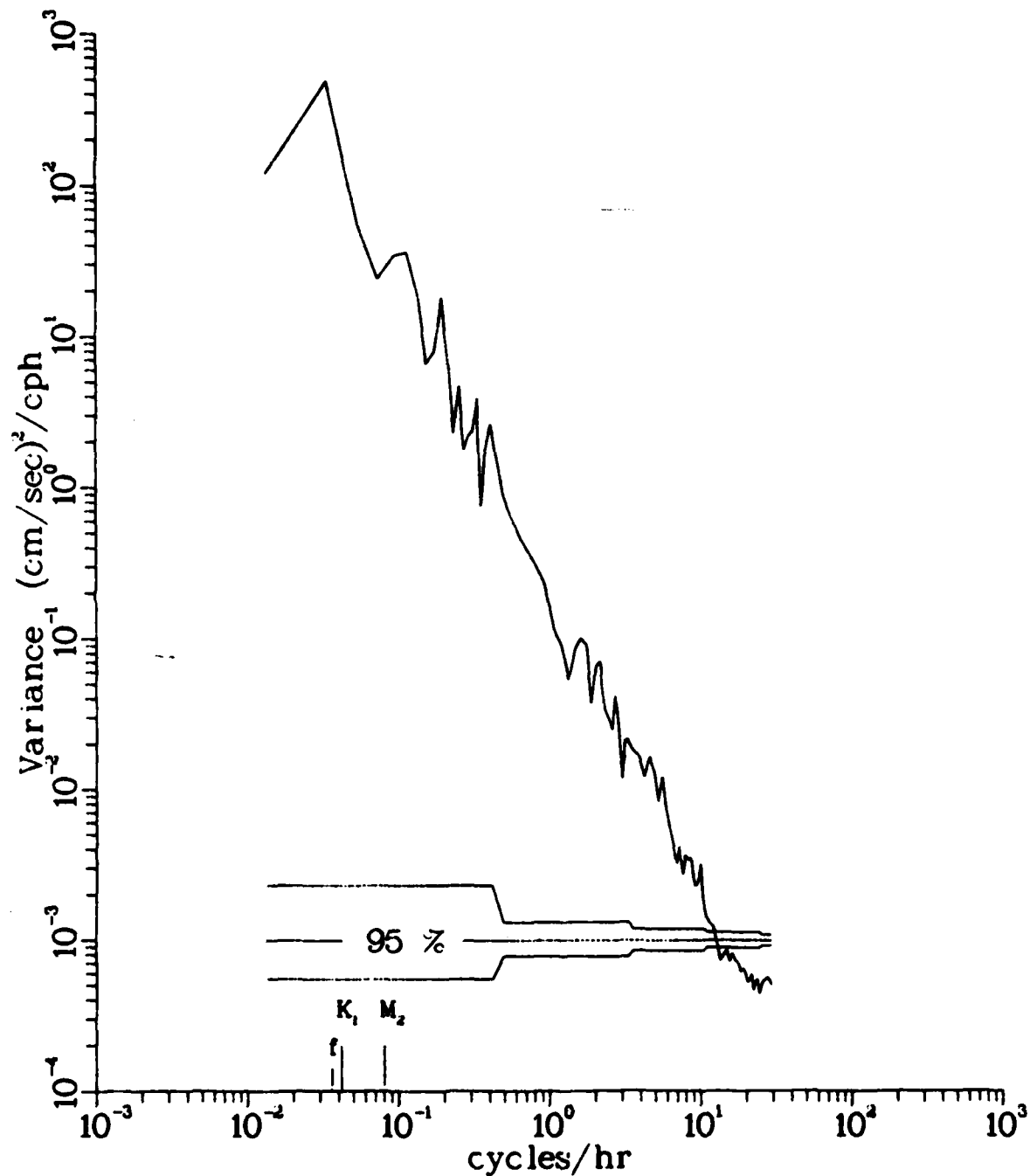


Variable U
 Depth 000172
 Meter 790100
 Lat. 25.805555
 Long -89.74165

Variable V
 Depth 000172
 Meter 790100
 Lat. 25.805555
 Long -89.74165

Figure 225.

CURRENT SPECTRUM



Variable . U
File . ACM
Meter 790100
Lat. 25.805555
Long -89.74165

Array ATOM79
Depth 00079
Start 20 DEC 1979
End 28 DEC 1979

Figure 226.

CURRENT SPECTRUM

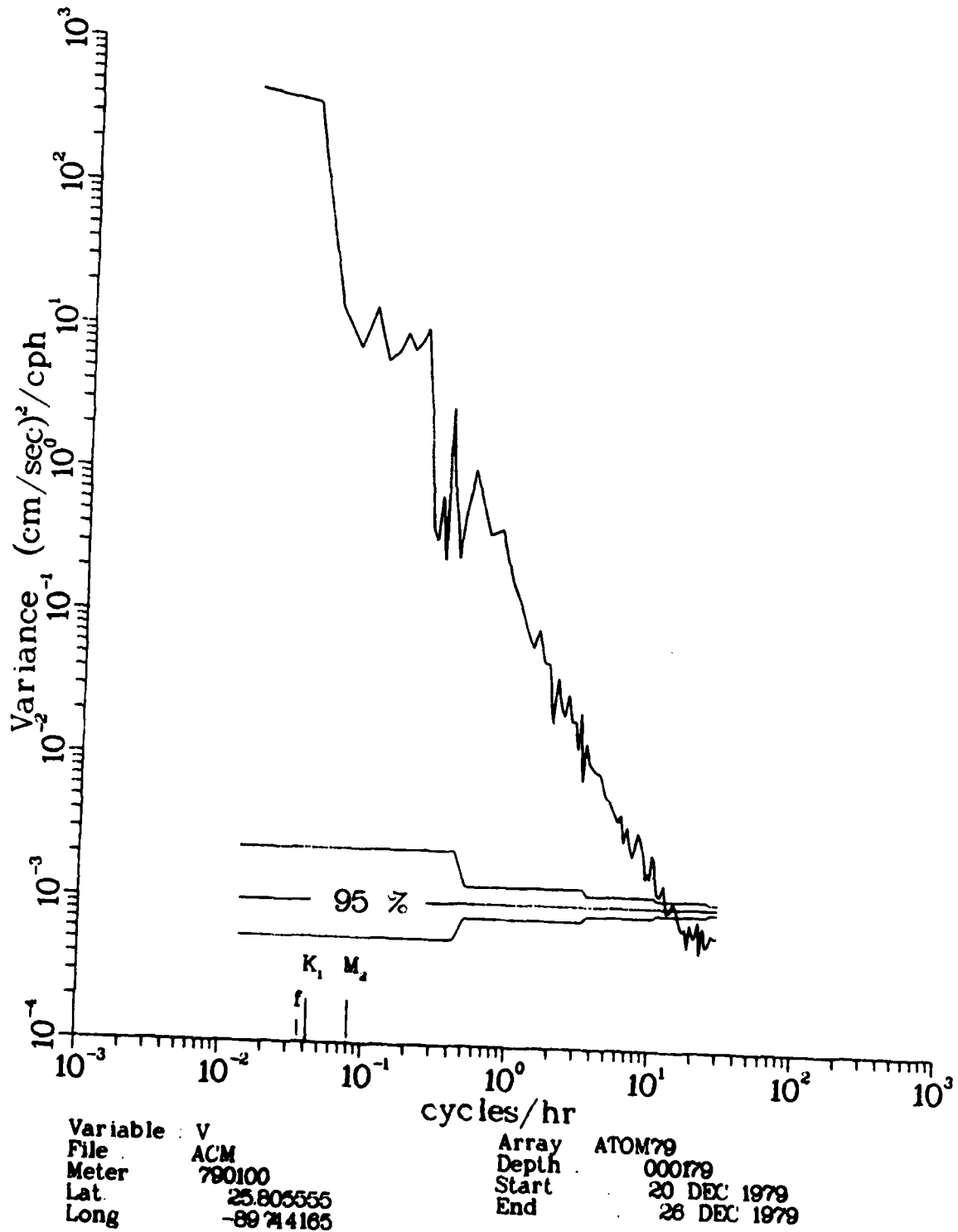
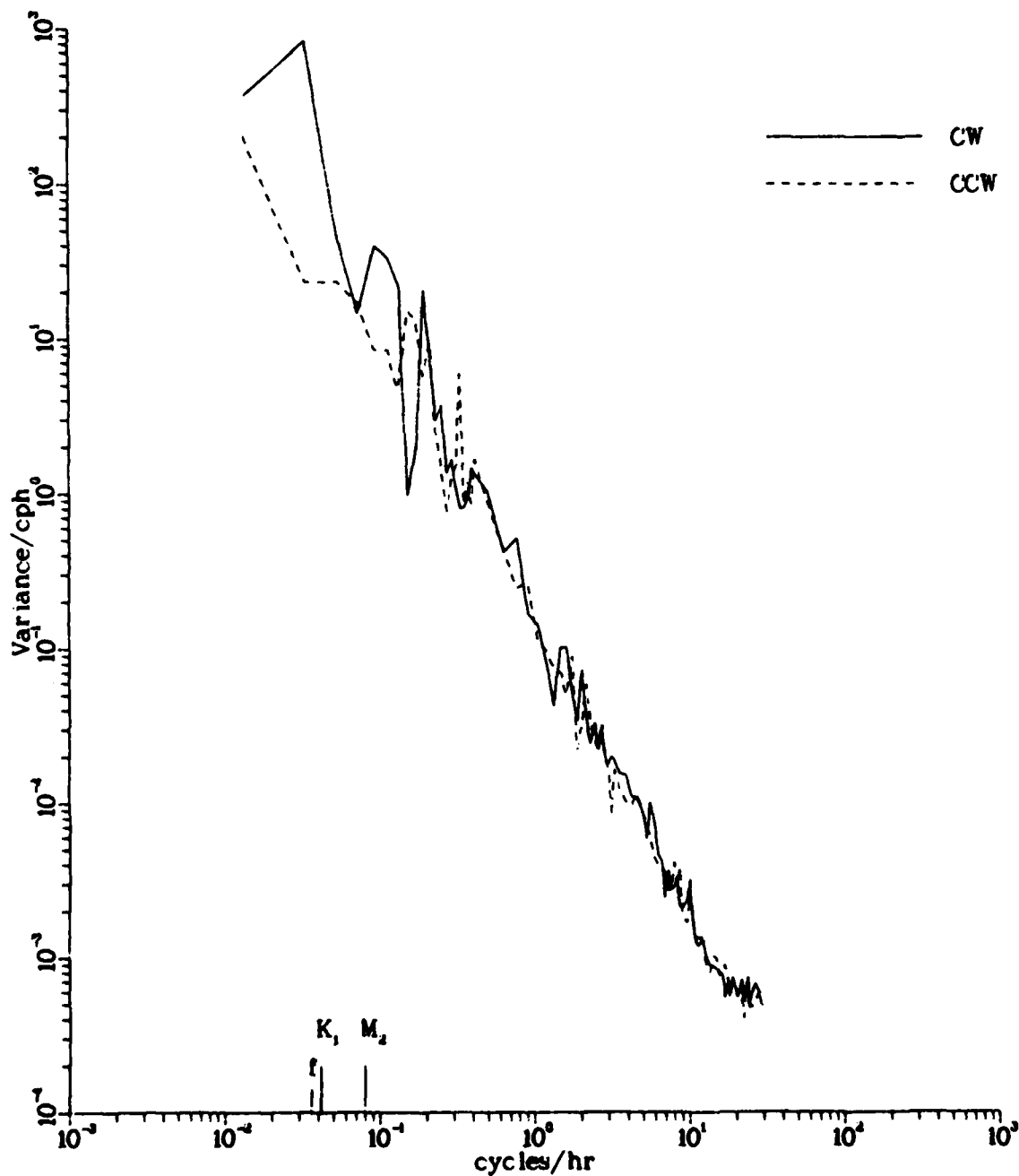


Figure 227.

ROTARY SPECTRUM



Variable U
 Depth 000179
 Meter 790100
 Lat 25.805555
 Long -89.74165

Variable V
 Depth 000179
 Meter 790100
 Lat 25.805555
 Long -89.74165

Figure 228.

CURRENT SPECTRUM

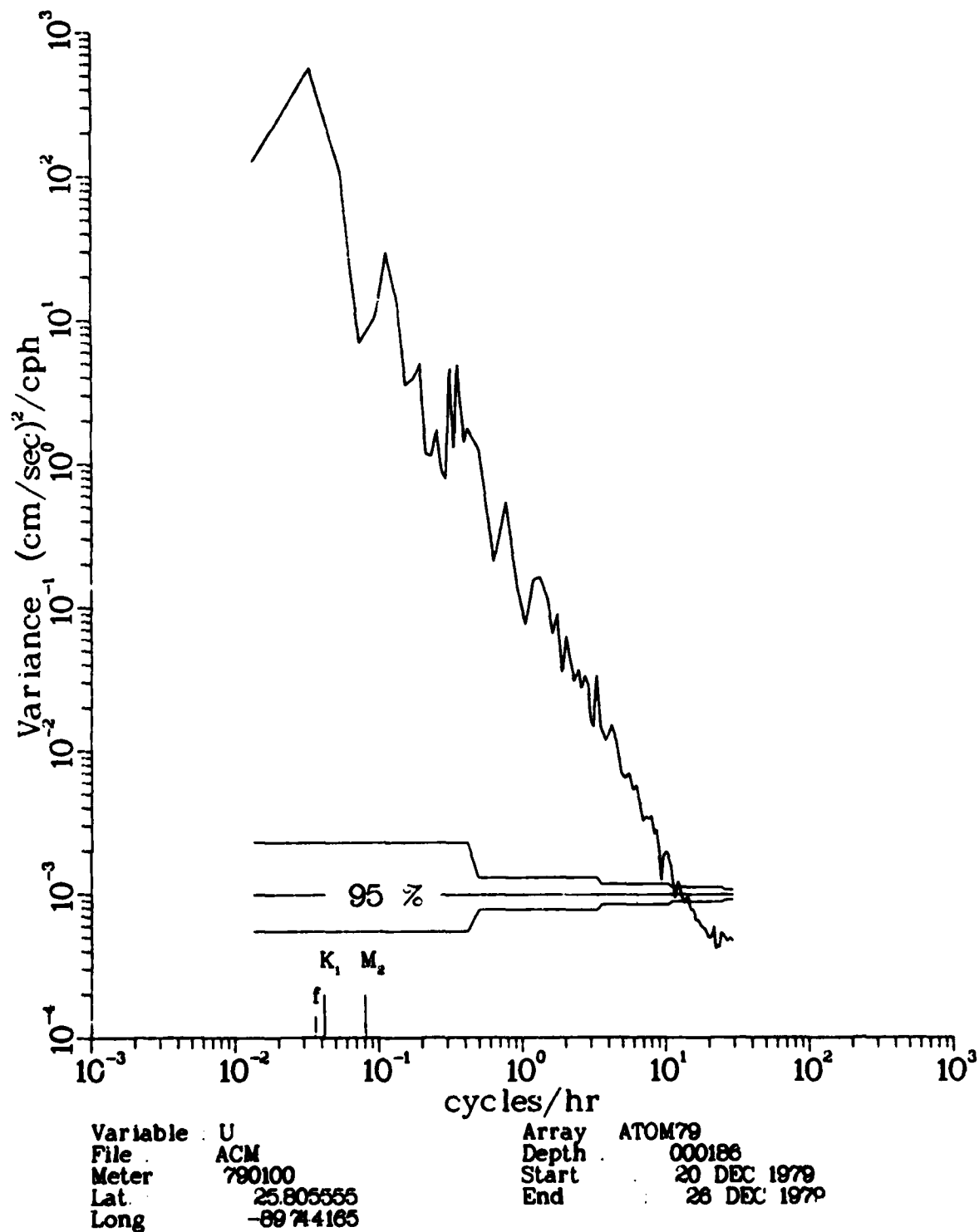
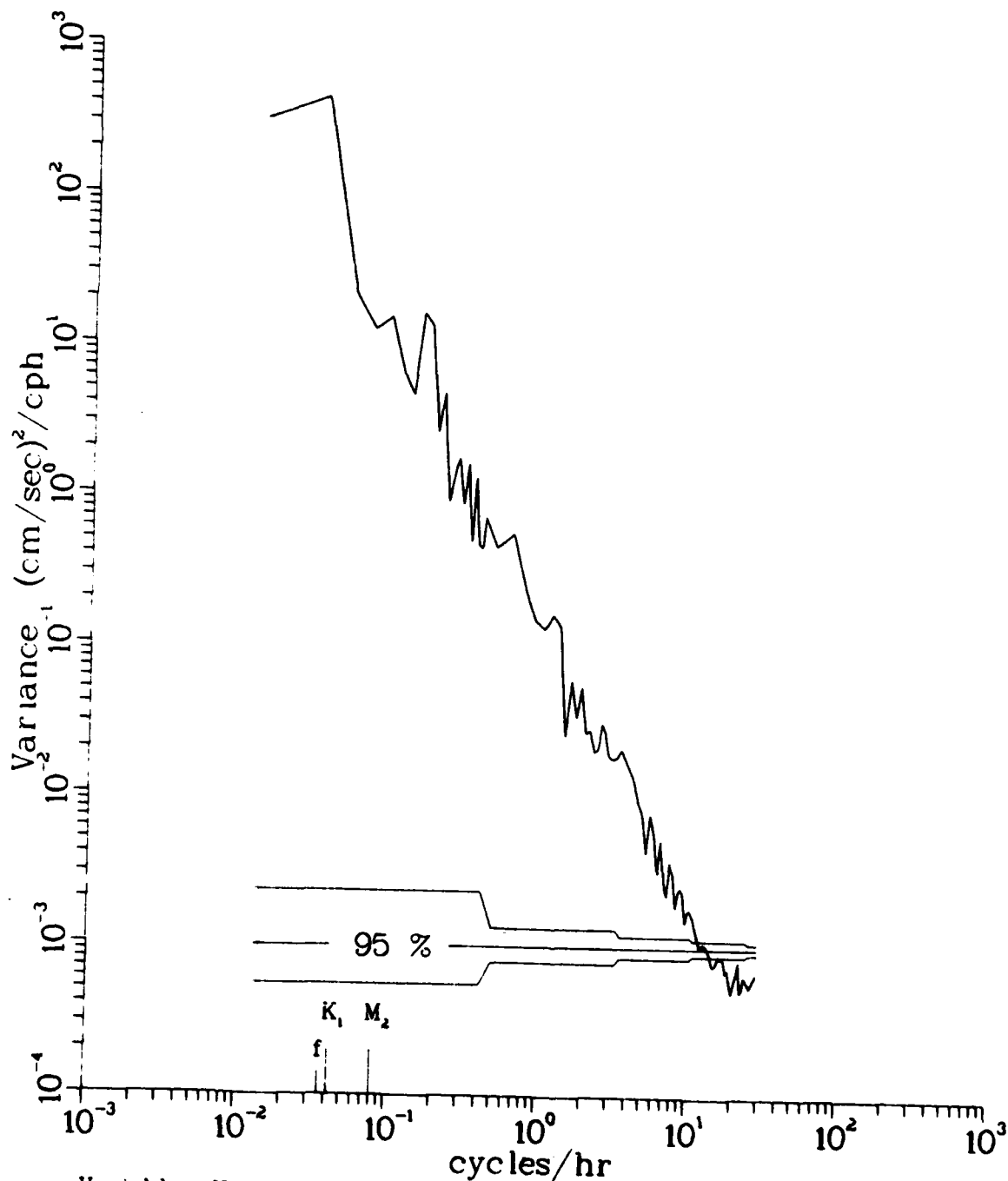


Figure 229.

CURRENT SPECTRUM

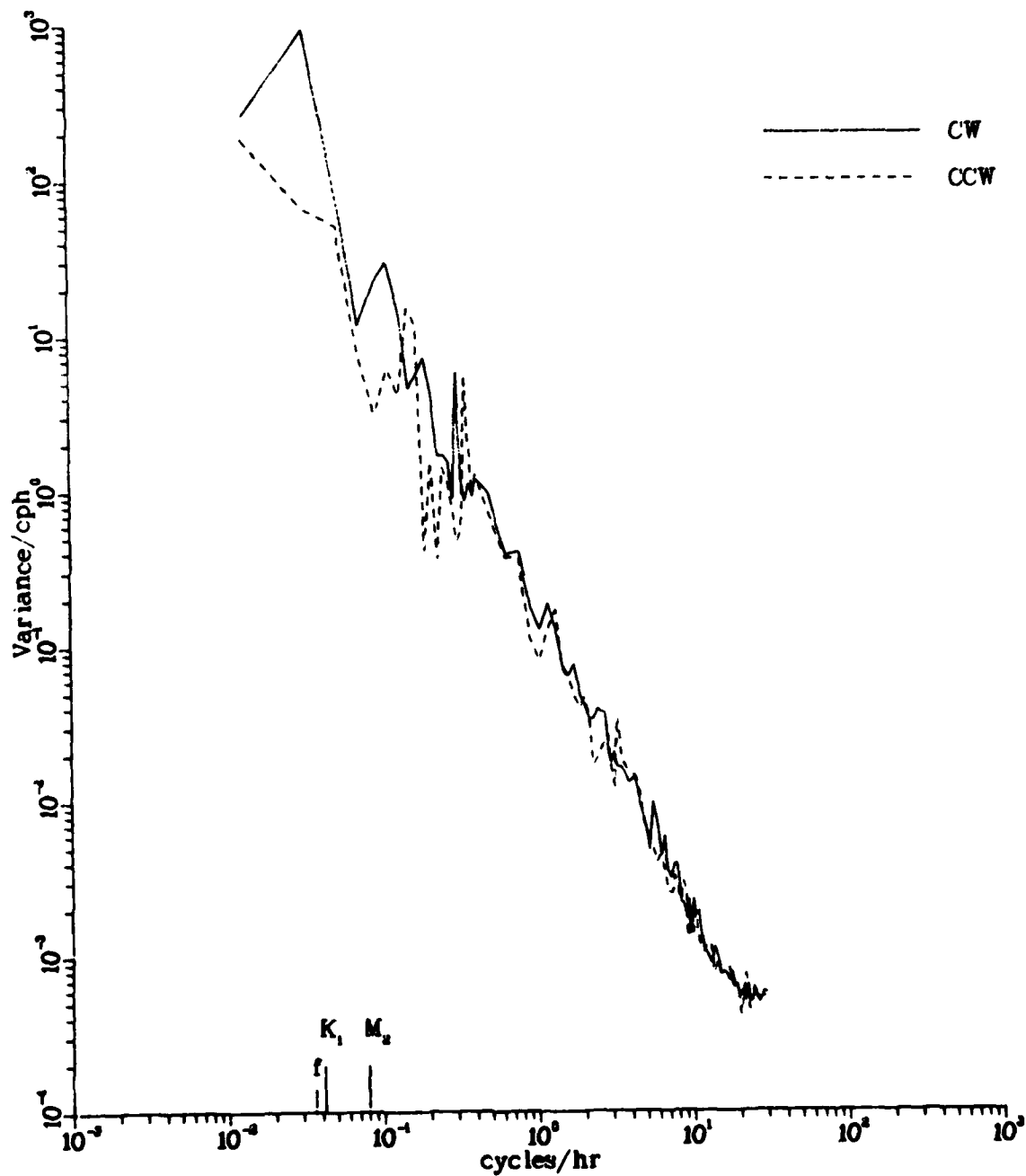


Variable : V
 File : ACM
 Meter : 790100
 Lat : 25 806555
 Long : -89.74165

Array : ATOM79
 Depth : 000186
 Start : 20 DEC 1979
 End : 28 DEC 1979

Figure 230.

ROTARY SPECTRUM

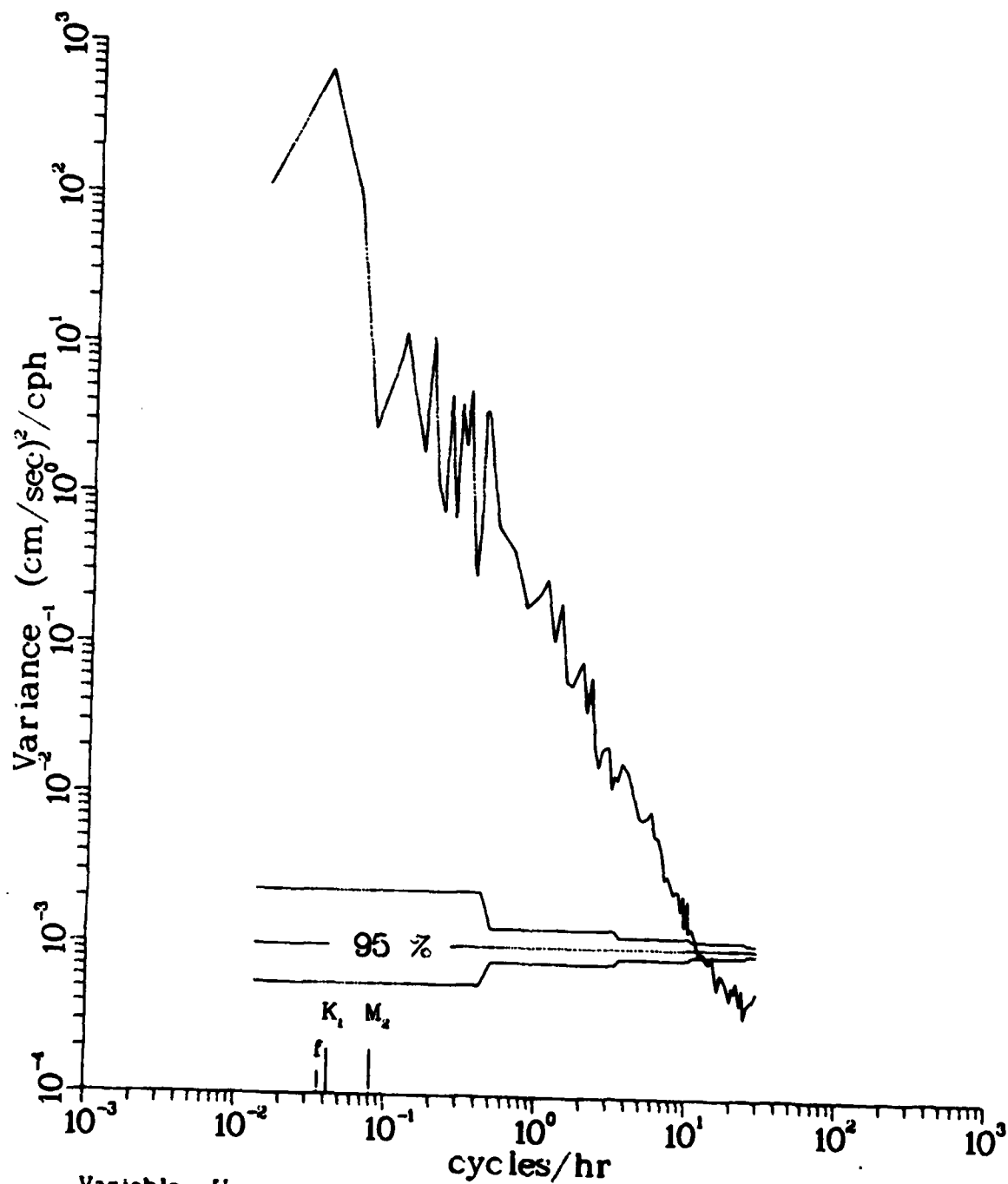


Variable : U
 Depth : 000186
 Meter : 790100
 Lat. : 25.805555
 Long : -89.74165

Variable : V
 Depth : 000186
 Meter : 790100
 Lat. : 25.805555
 Long : -89.74165

Figure 231.

CURRENT SPECTRUM

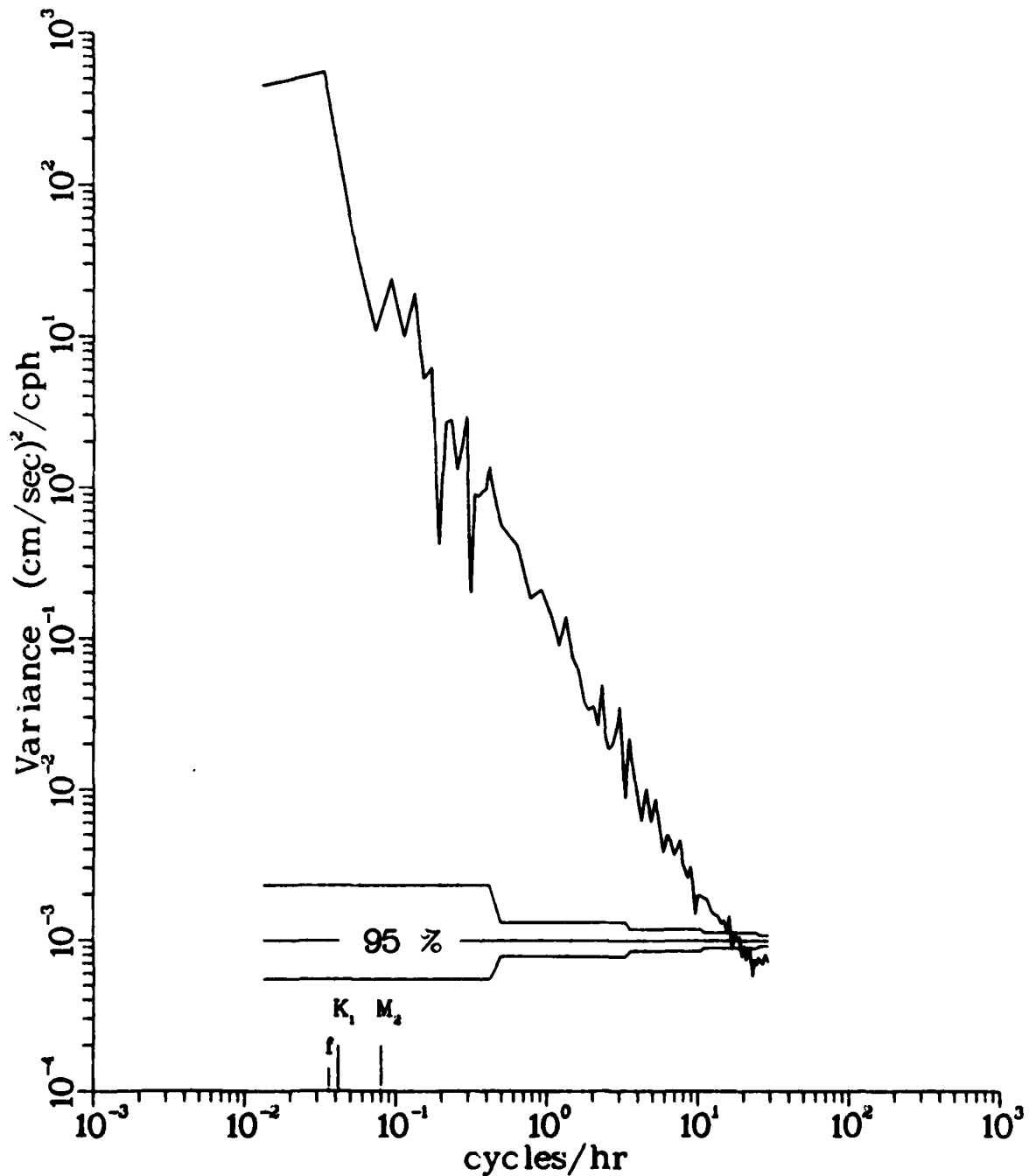


Variable U
File ACM
Meter 780100
Lat 23.805555
Long -89.74165

Array ATOM79
Depth 000193
Start 20 DEC 1979
End 26 DEC 1979

Figure 232.

CURRENT SPECTRUM

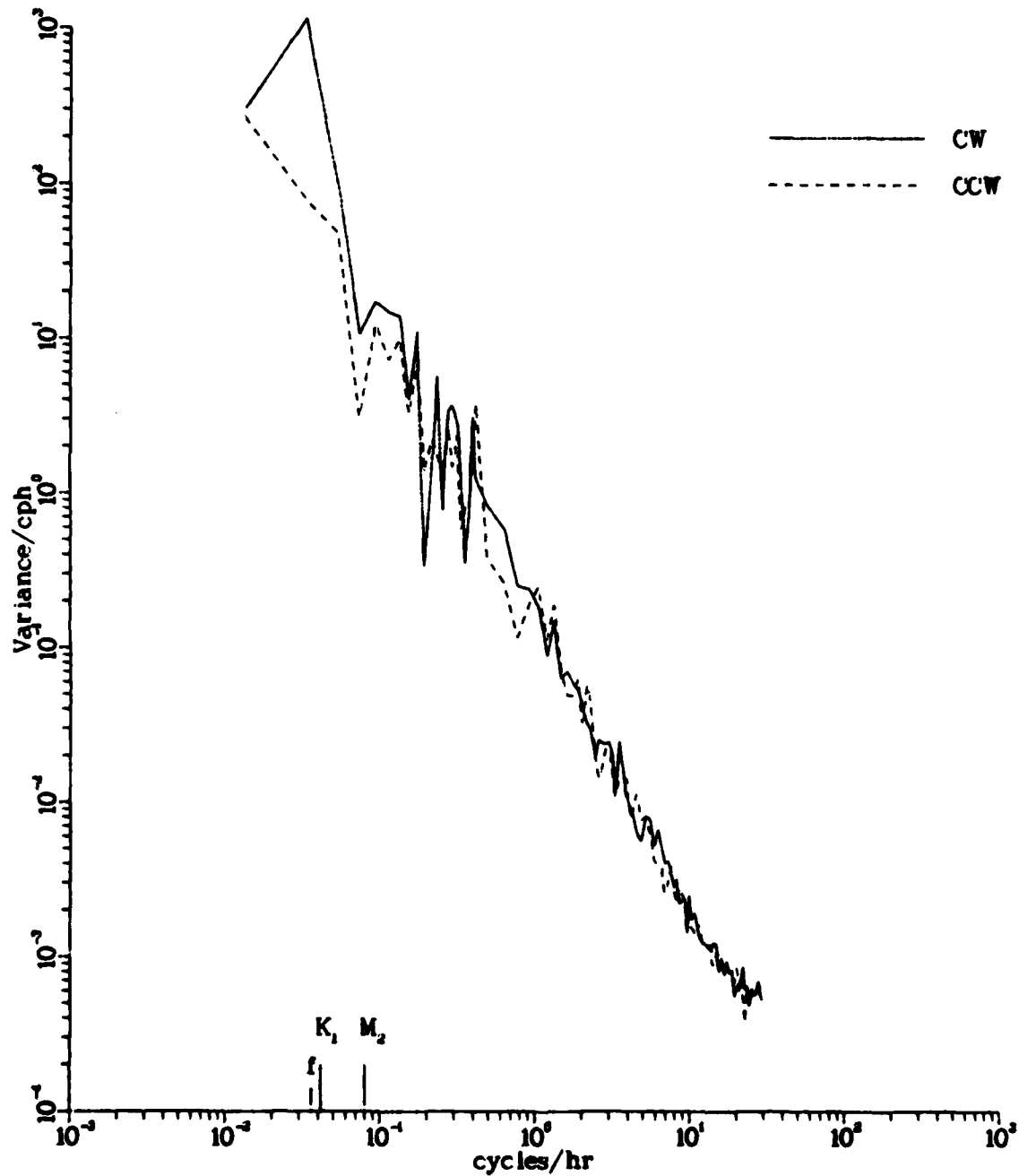


Variable V
 File ACM
 Meter 790100
 Lat. 25.80555
 Long -89.74165

Array ATOM79
 Depth 000193
 Start 20 DEC 1979
 End 26 DEC 1979

Figure 233.

ROTARY SPECTRUM

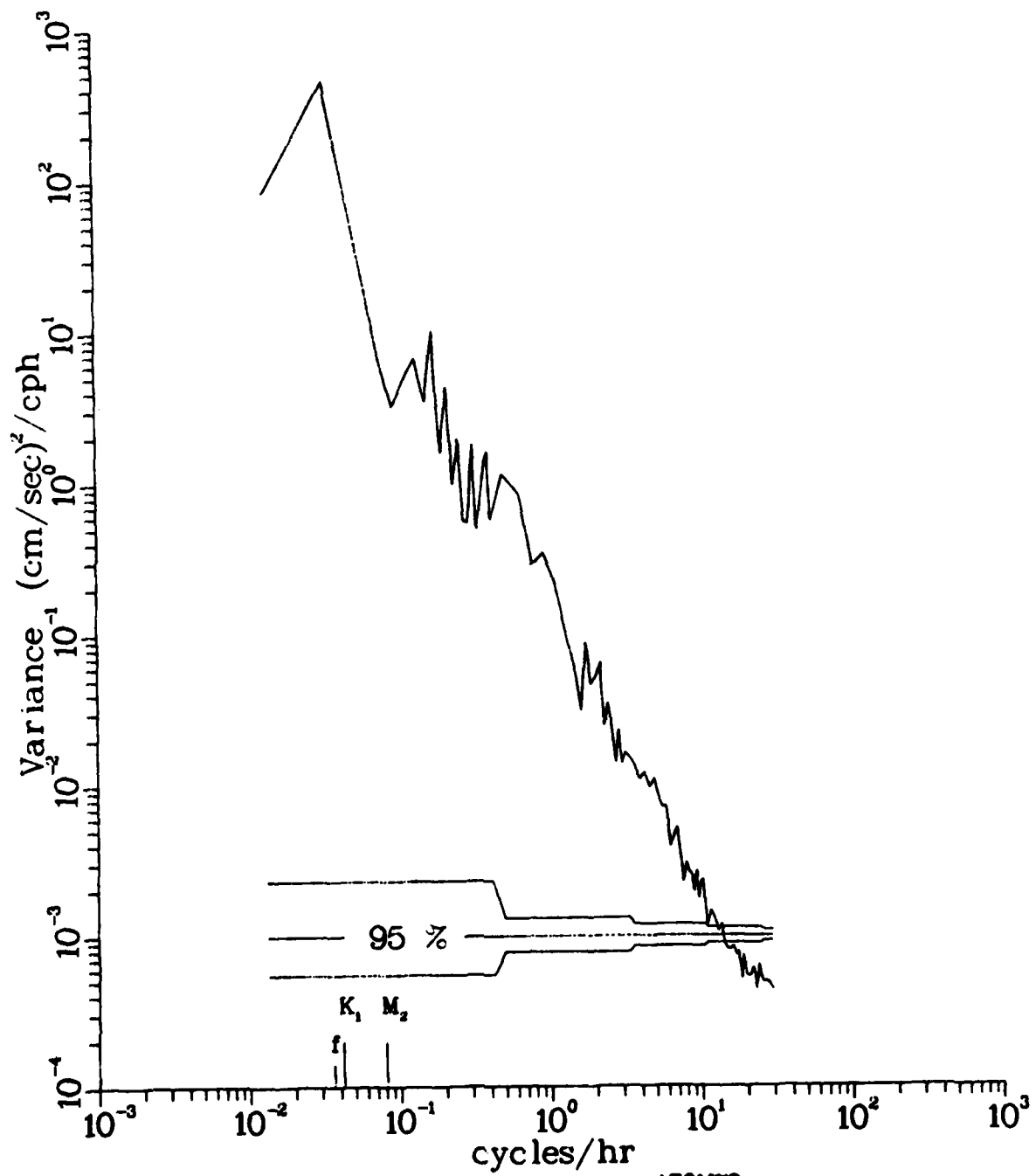


Variable . U
 Depth . 000193
 Meter 790100
 Lat. 25.805555
 Long -89.714165

Variable . V
 Depth . 000193
 Meter 790100
 Lat. 25.805555
 Long -89.714165

Figure 234.

CURRENT SPECTRUM



Variable : U
 File : ACM
 Meter : 780100
 Lat : 25.805555
 Long : -89.744165

Array : ATOM79
 Depth : 000200
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 235.

CURRENT SPECTRUM

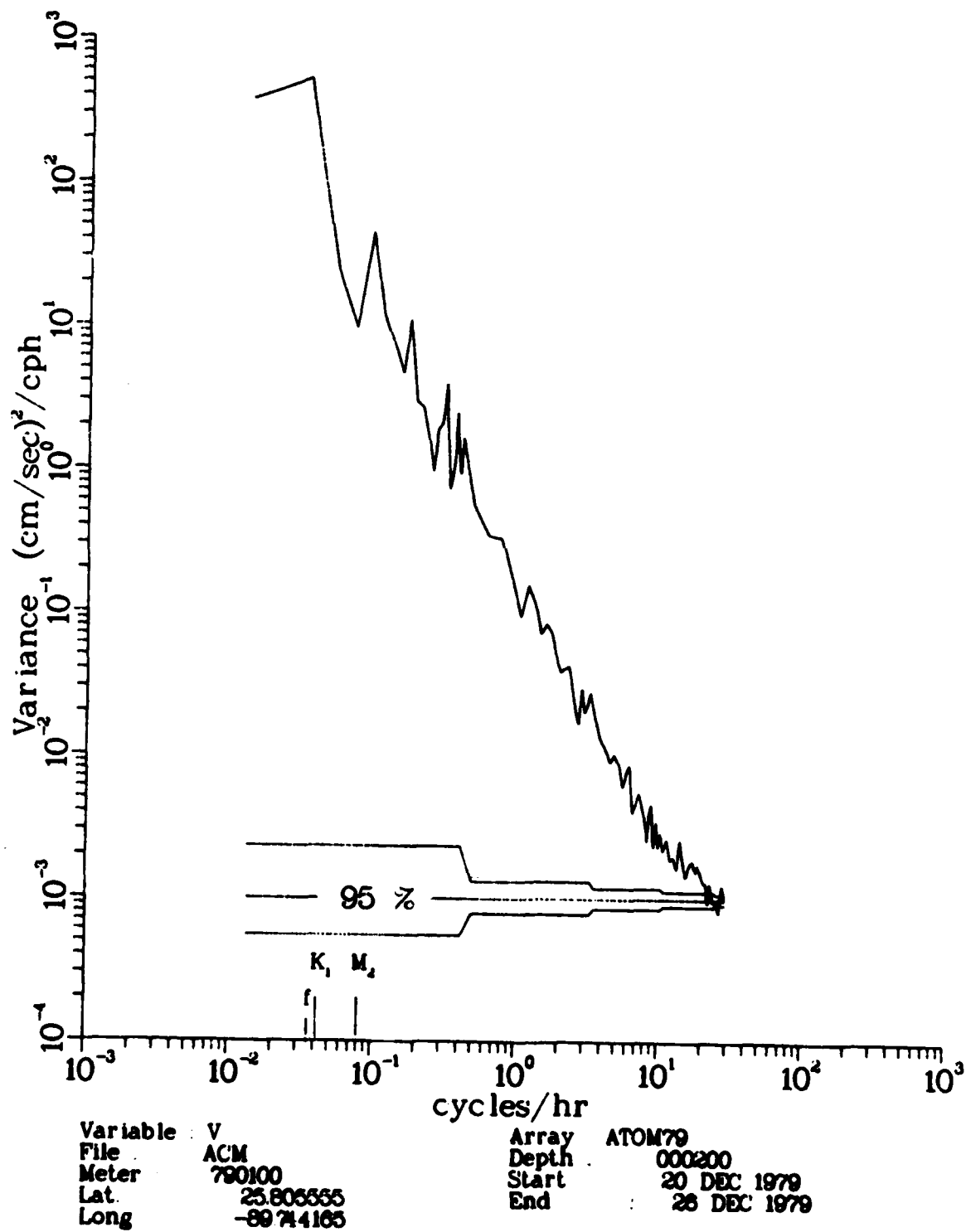


Figure 236.

ROTARY SPECTRUM

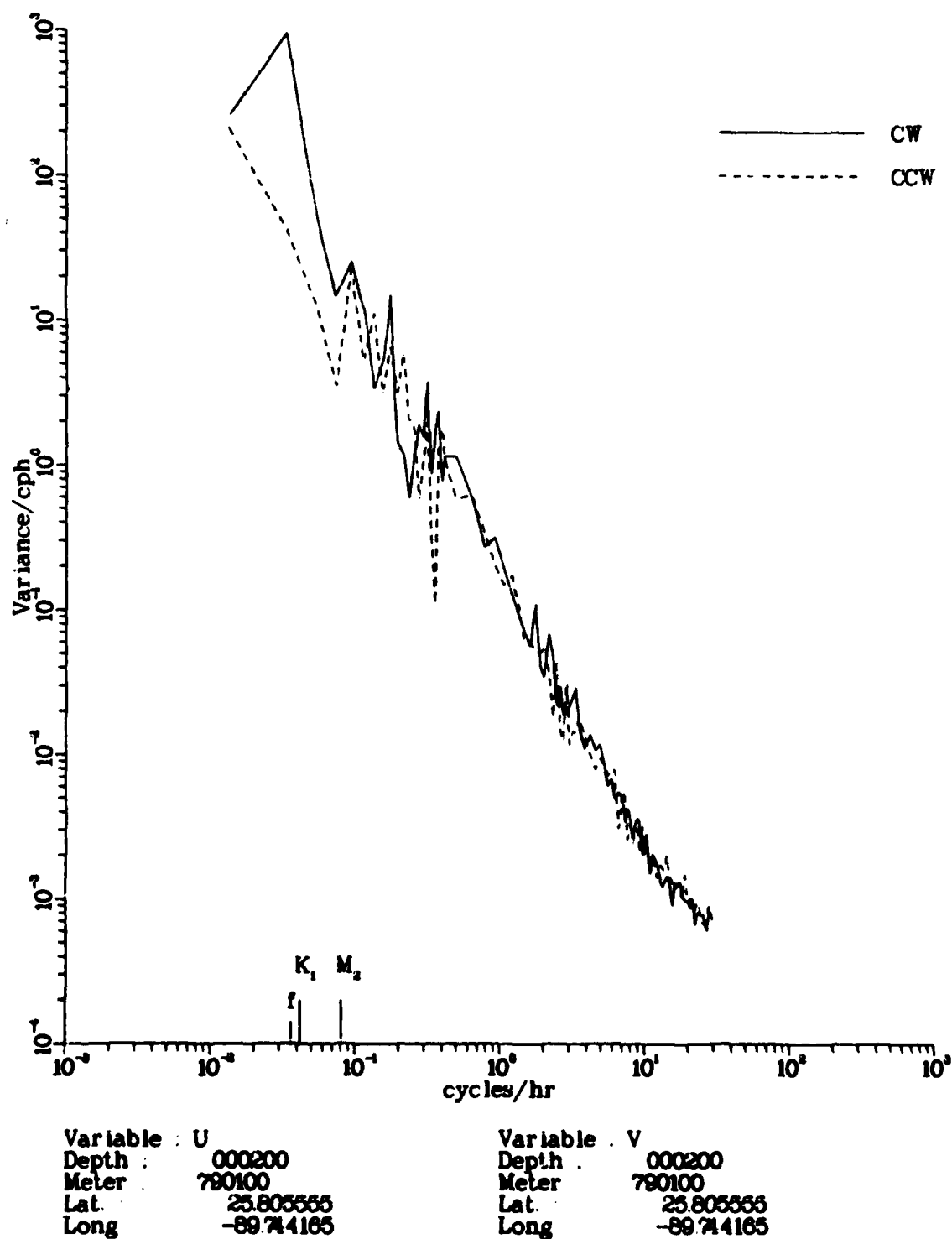
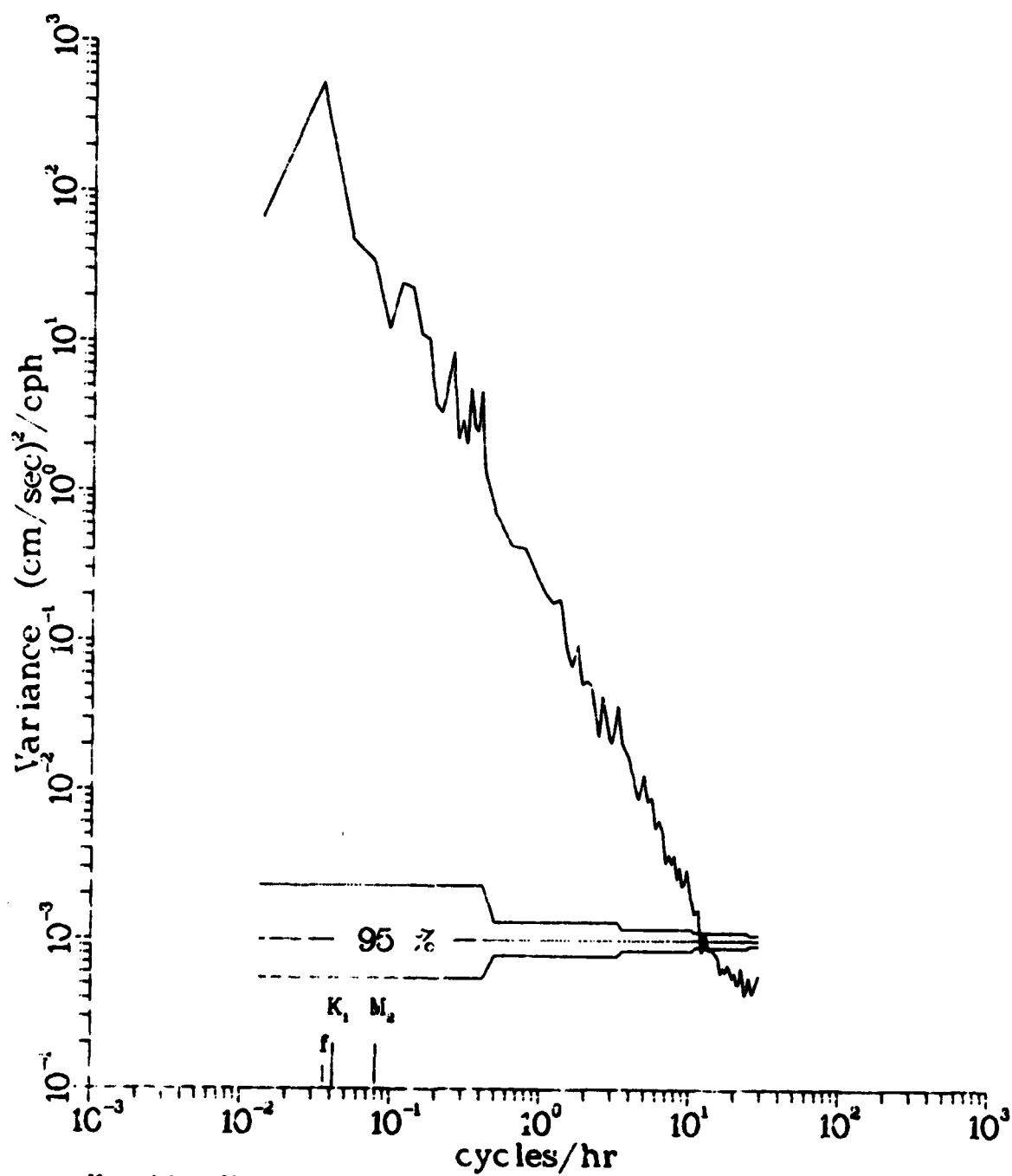


Figure 237.

CURRENT SPECTRUM

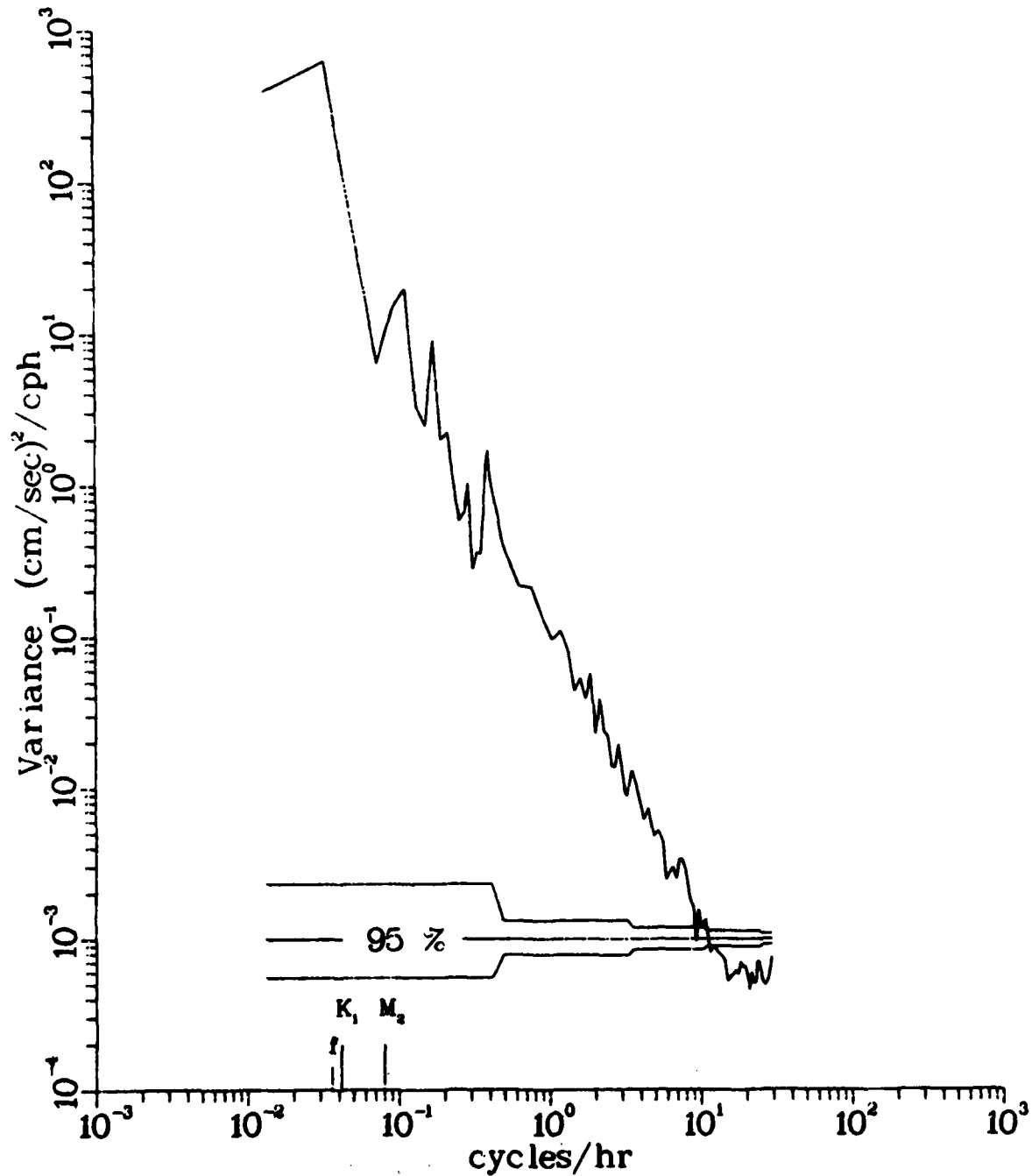


Variable : U
 File : ACM
 Meter : 780100
 Lat. : 25.803555
 Long : -89.74165

Array : ATOM79
 Depth : 000207
 Start : 20 DEC 1979
 End : 28 DEC 1979

Figure 238.

CURRENT SPECTRUM

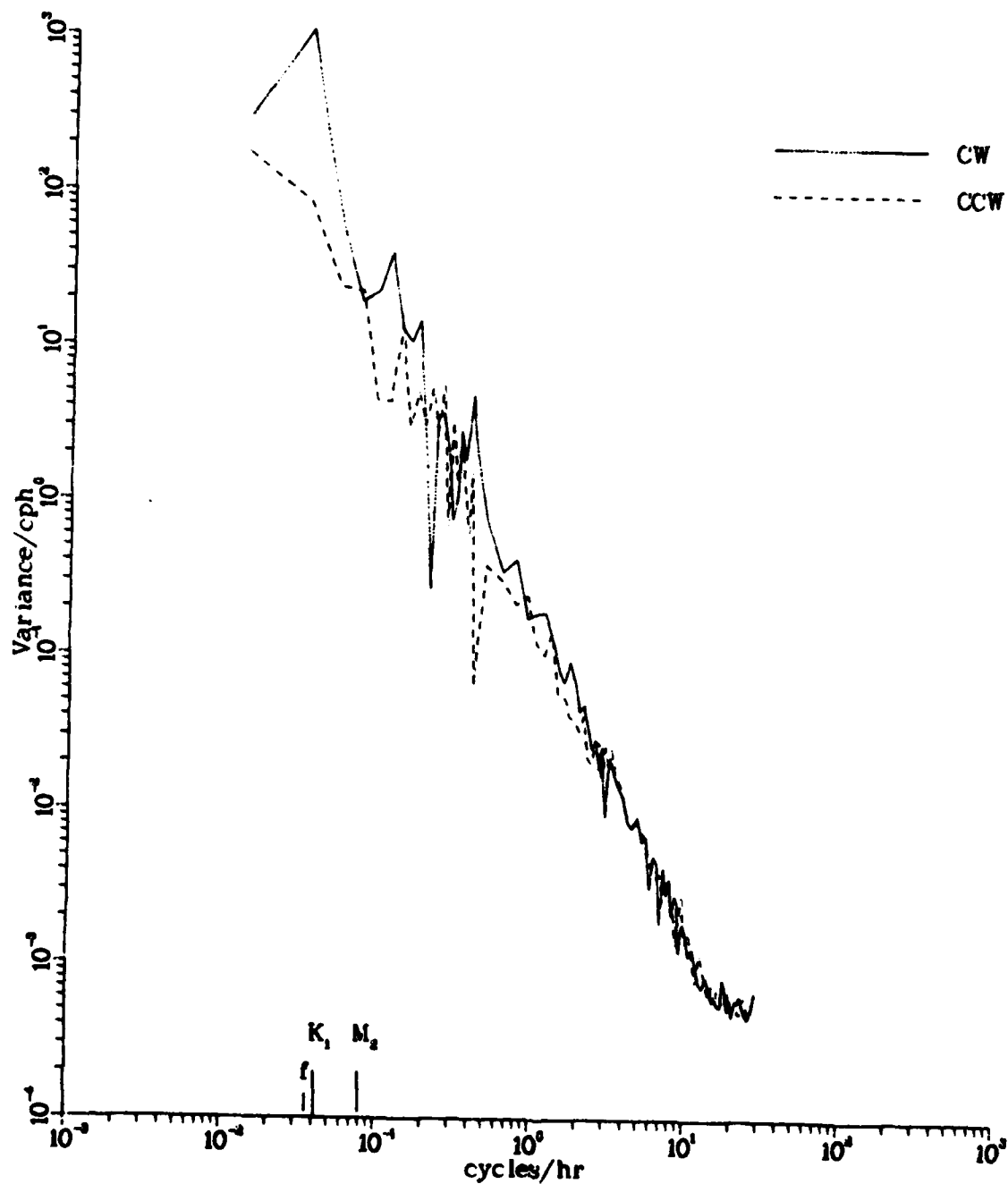


Variable : V
 File : ACM
 Meter : 780100
 Lat. : 25.805555
 Long : -89.74165

Array : ATOM79
 Depth : 000207
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 239.

ROTARY SPECTRUM

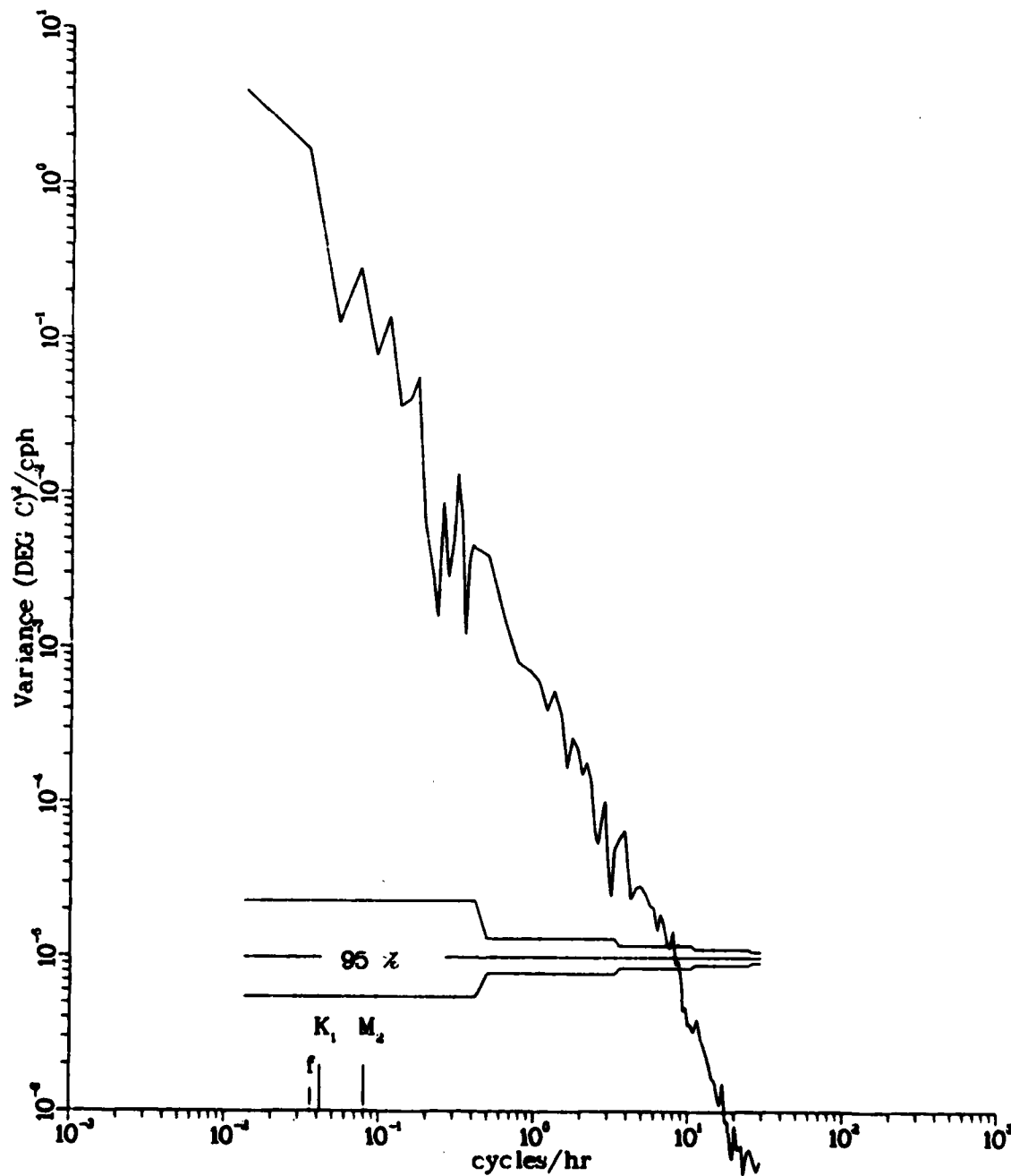


Variable U
 Depth 000207
 Meter 790100
 Lat 25.805555
 Long -89.74165

Variable V
 Depth 000207
 Meter 790100
 Lat 25.805555
 Long -89.74165

Figure 240.

TEMPERATURE SPECTRUM

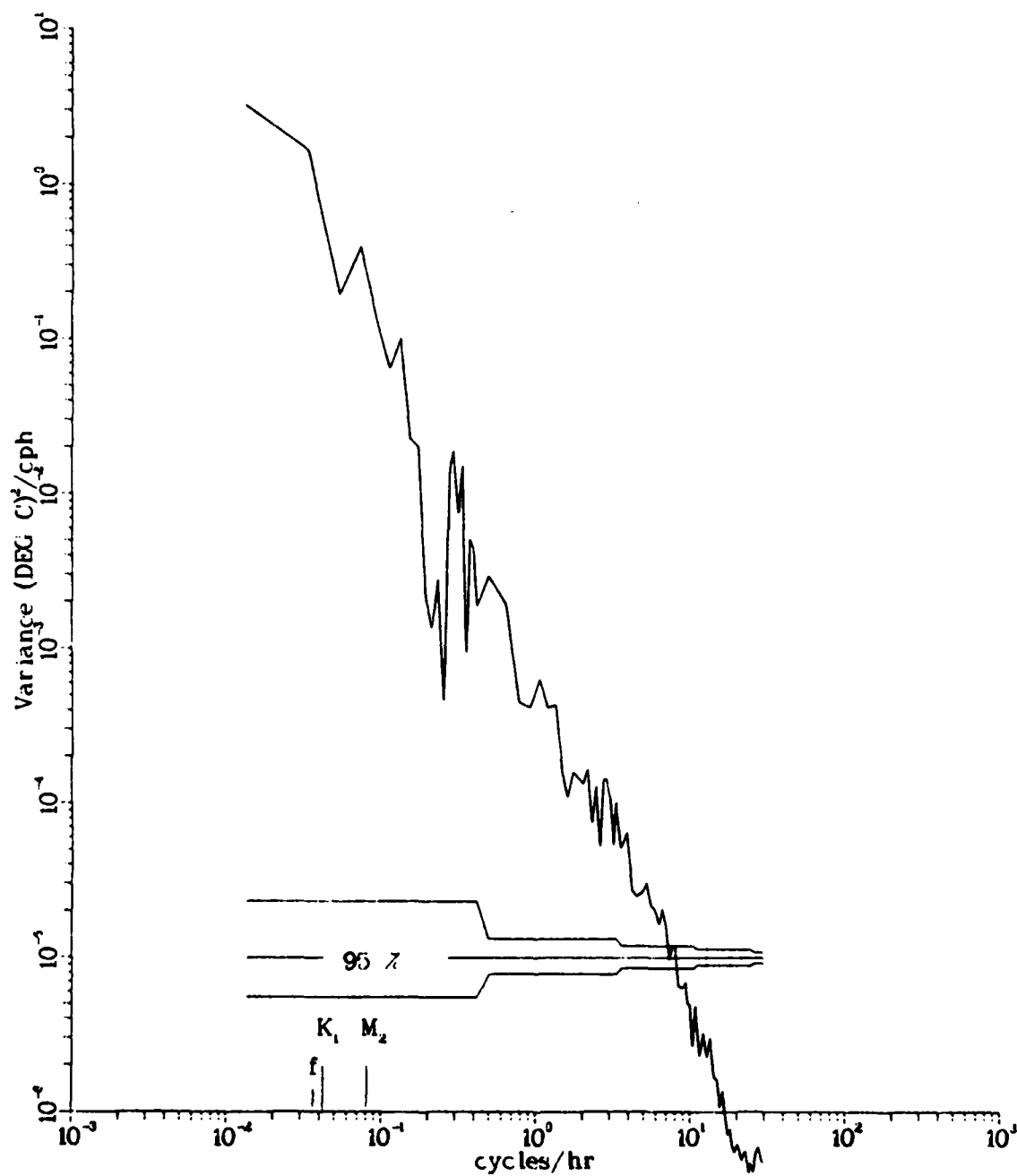


Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25.805555
 Long : -89.74165

Array : ATOM79
 Depth : 000123
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 241.

TEMPERATURE SPECTRUM

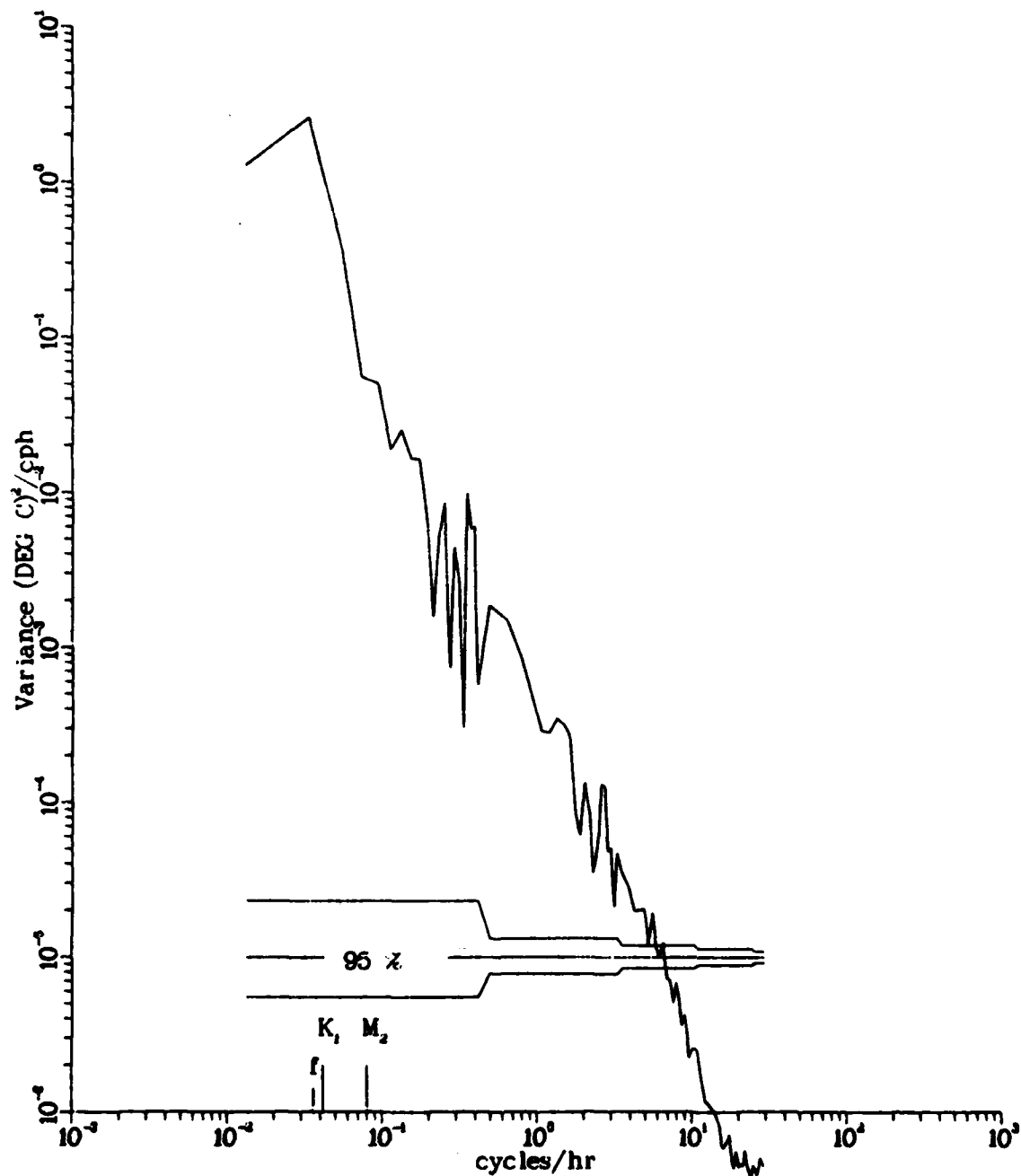


Variable T
 File ACM
 Meter 790100
 Lat 25.805555
 Long -89.714165

Array ATOM79
 Depth 000130
 Start 20 DEC 1979
 End 26 DEC 1979

Figure 242.

TEMPERATURE SPECTRUM

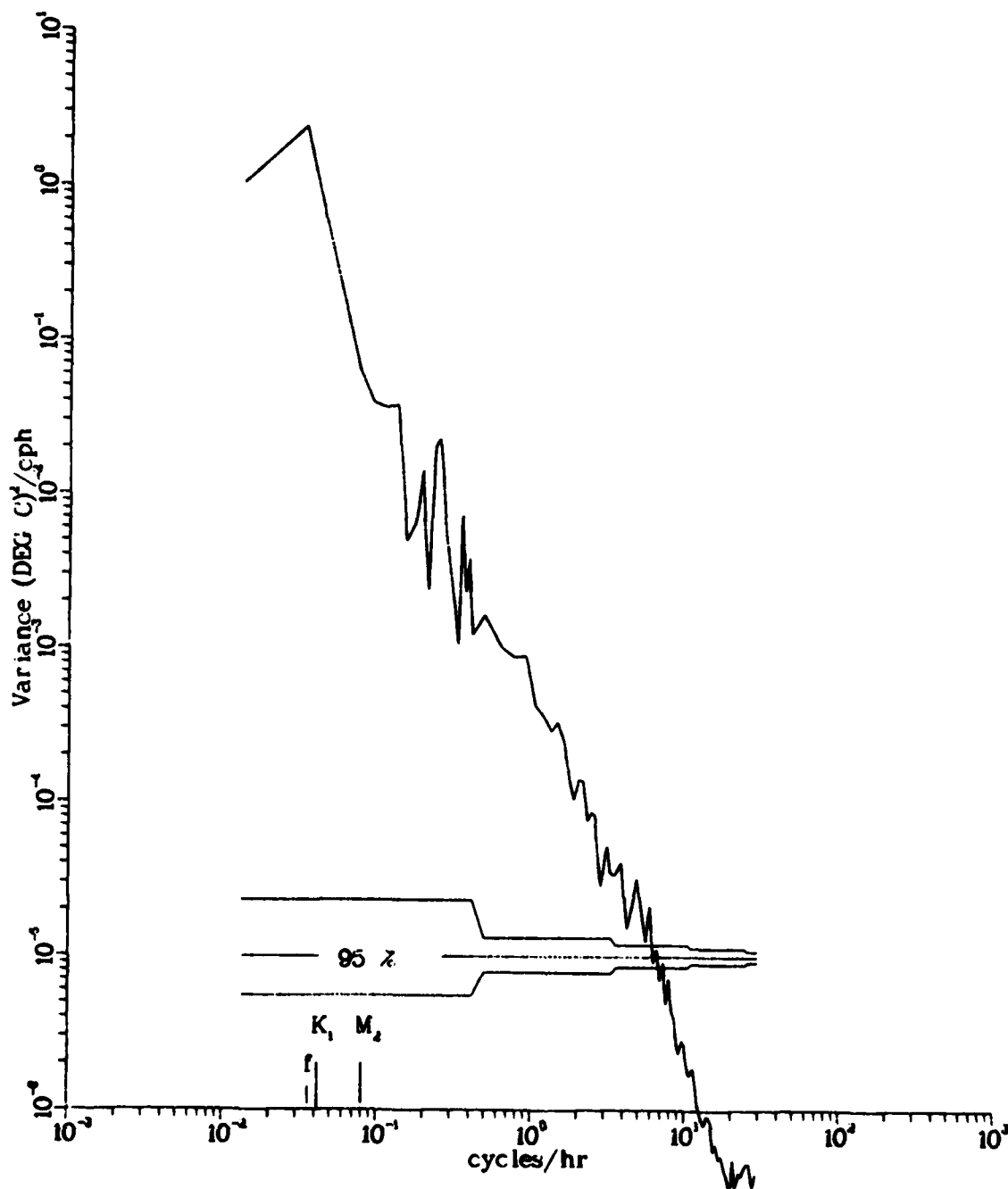


Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25.803333
 Long : -89.74165

Array : ATOM79
 Depth : 000144
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 243.

TEMPERATURE SPECTRUM

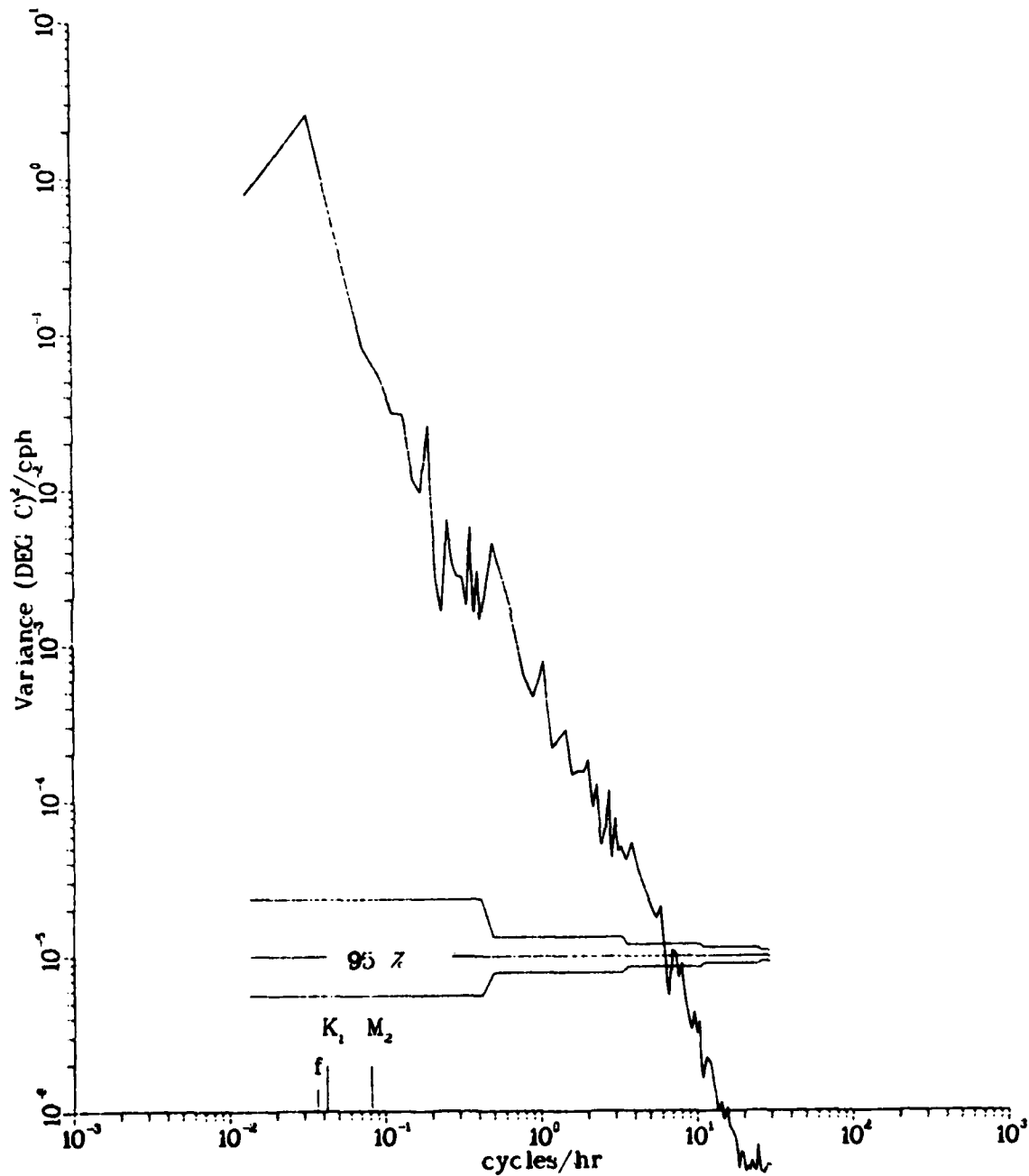


Variable T
File ACM
Meter 790100
Lat 25.805555
Long -89.74165

Array ATOM79
Depth 000151
Start 20 DEC 1979
End 26 DEC 1979

Figure 244.

TEMPERATURE SPECTRUM

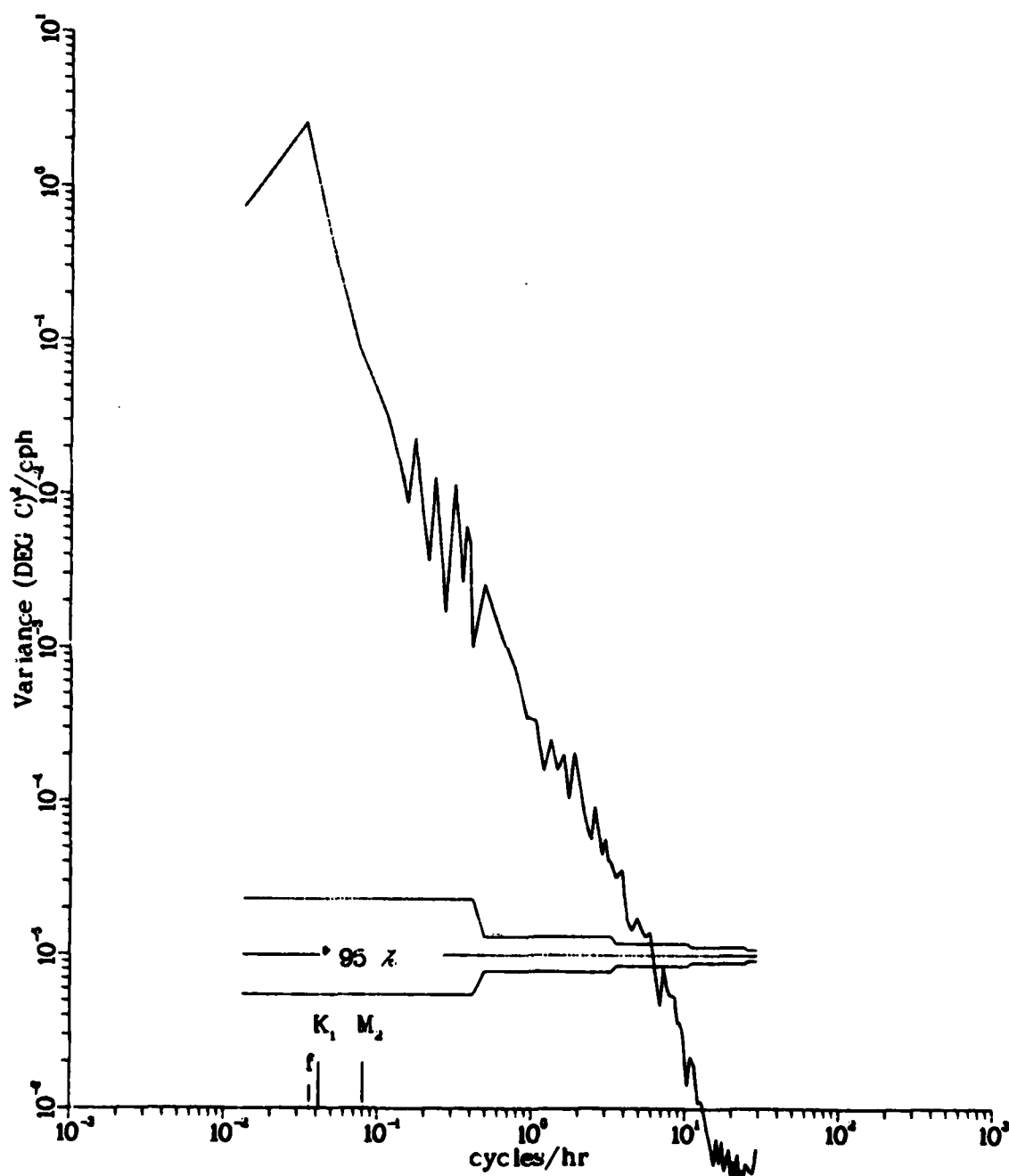


Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25 805555
 Long : -89 74165

Array : ATOM79
 Depth : 000158
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 245.

TEMPERATURE SPECTRUM

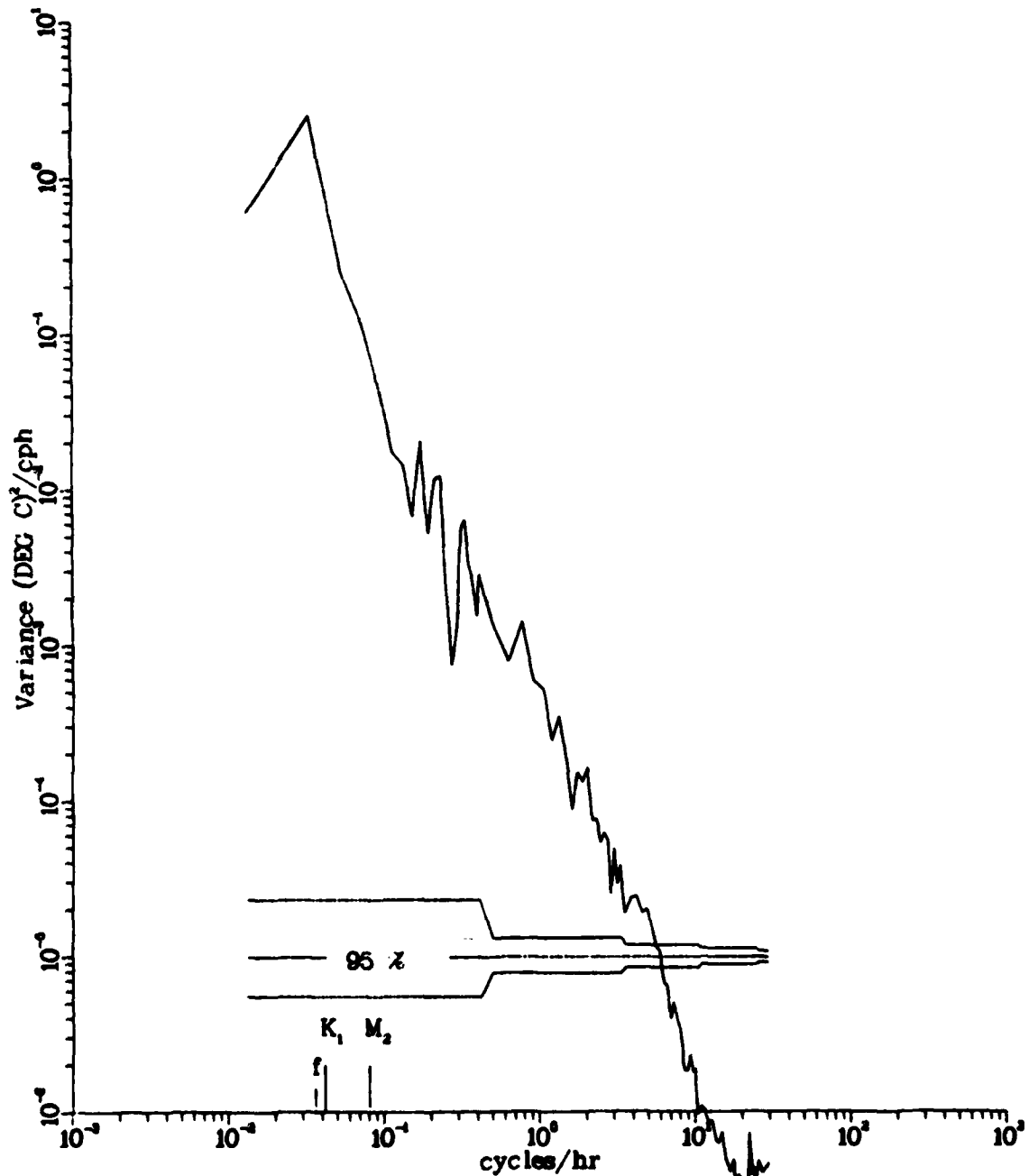


Variable T
File ACM
Meter 790100
Lat 25.805555
Long -89.74165

Array ATOM79
Depth 000165
Start 20 DEC 1979
End 26 DEC 1979

Figure 246.

TEMPERATURE SPECTRUM

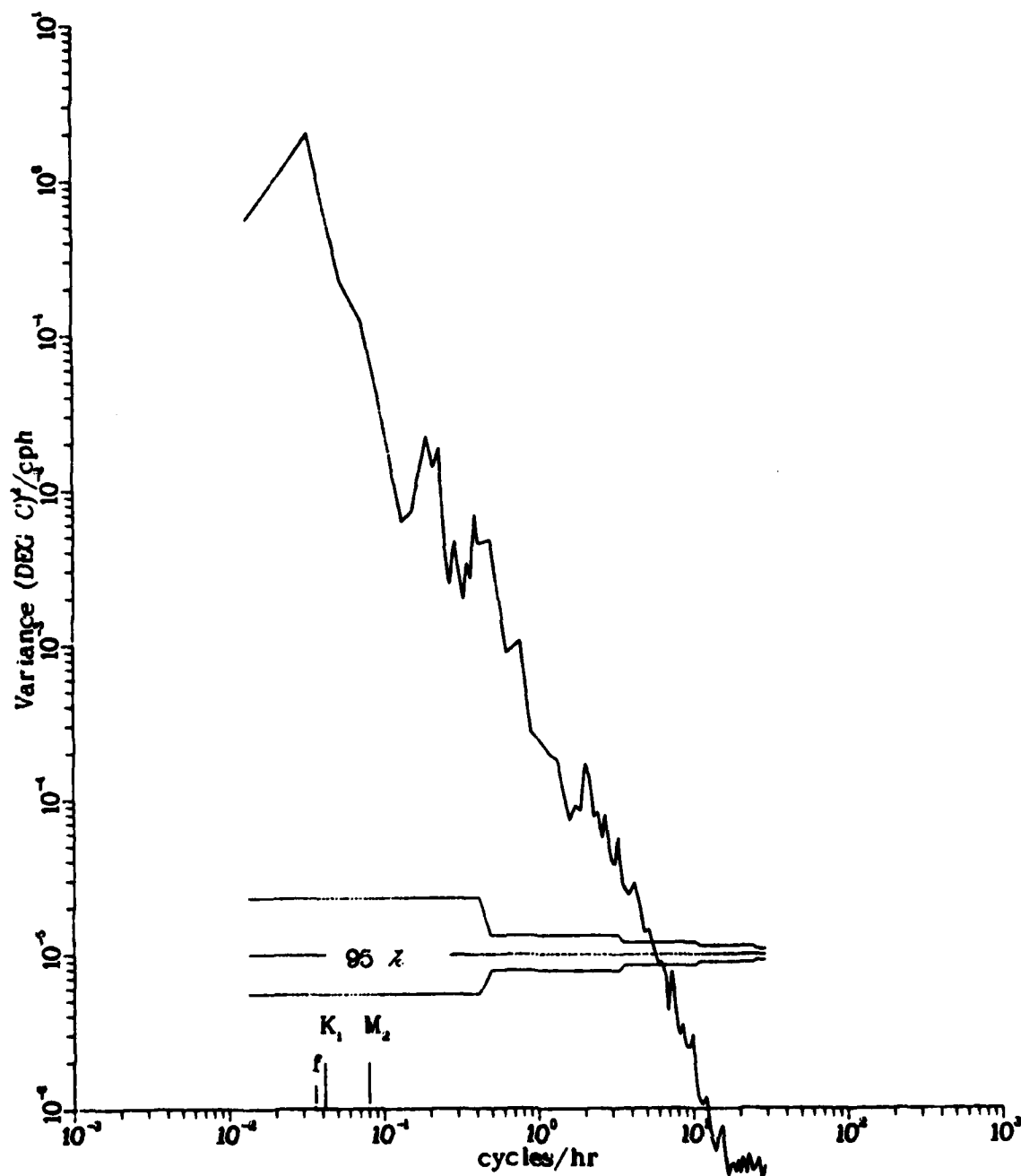


Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25.805555
 Long : -89.74165

Array : ATOM79
 Depth : 000172
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 247.

TEMPERATURE SPECTRUM

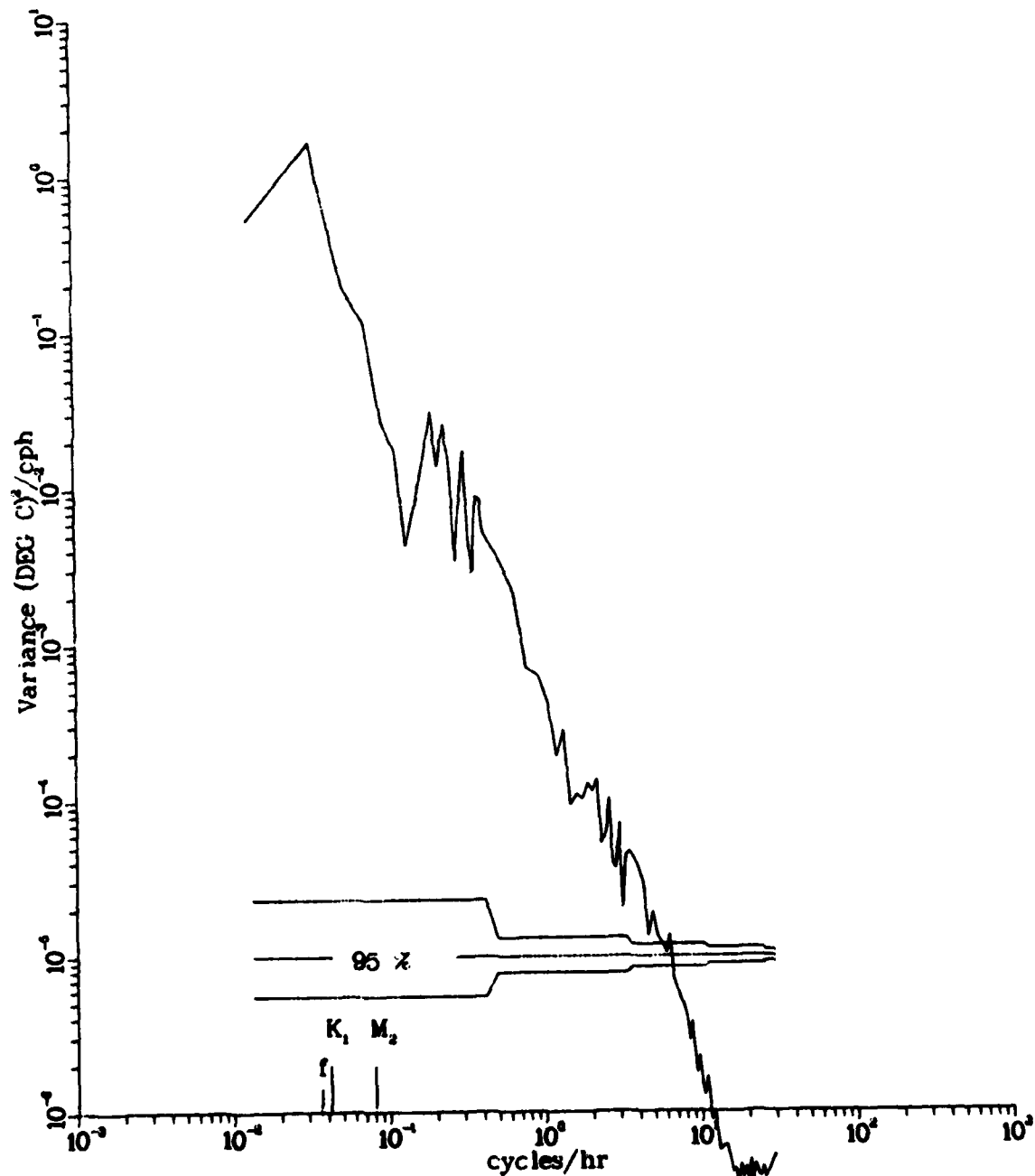


Variable T
File ACM
Meter 790100
Lat. 25.805555
Long -89.74165

Array ATOM79
Depth 000179
Start 20 DEC 1979
End 26 DEC 1979

Figure 248.

TEMPERATURE SPECTRUM

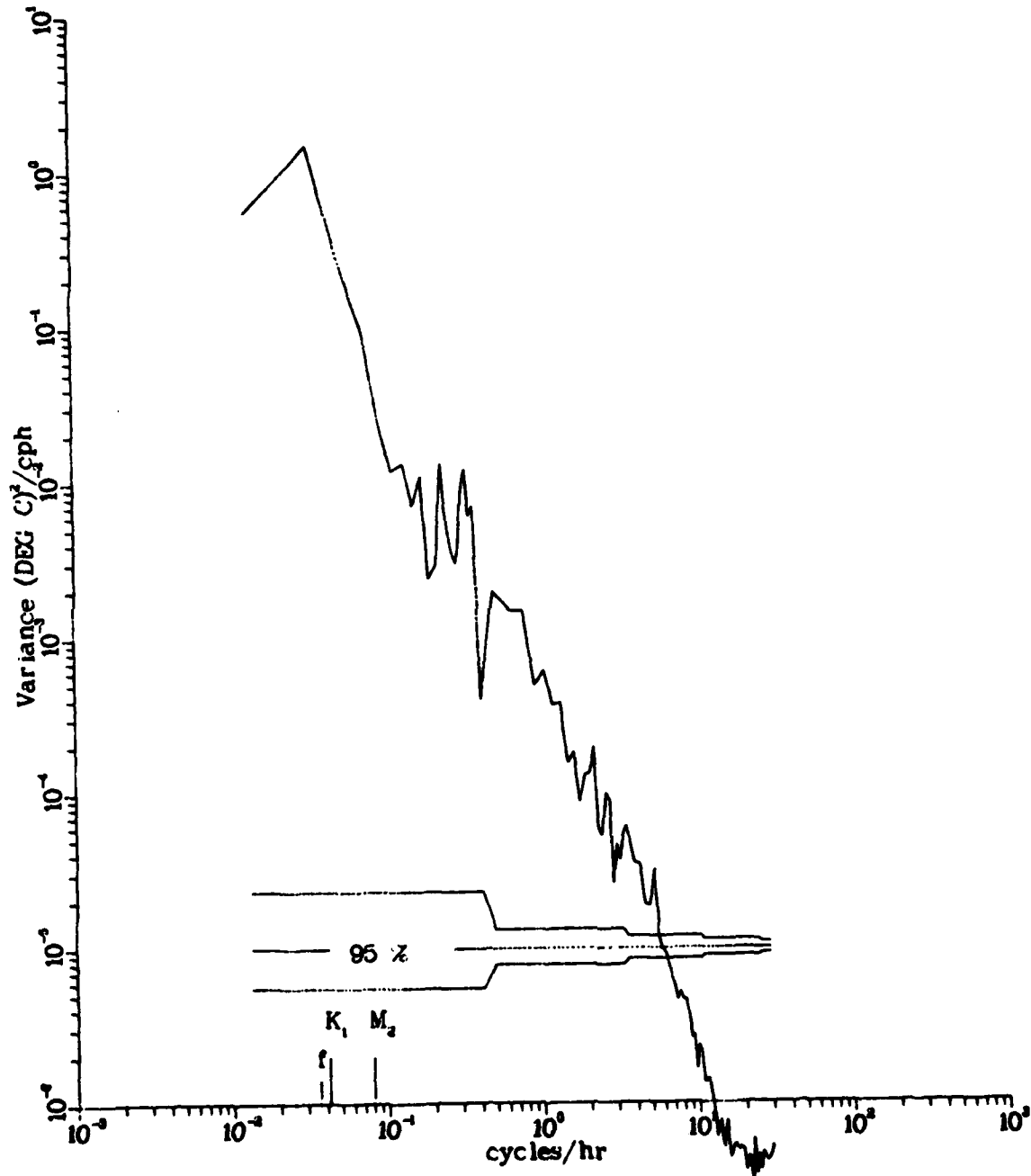


Variable : T
 File : ACM
 Meter : 780100
 Lat : 25 805556
 Long : -89 744165

Array : ATOM79
 Depth : 000186
 Start : 20 DEC 1979
 End : 28 DEC 1979

Figure 249.

TEMPERATURE SPECTRUM

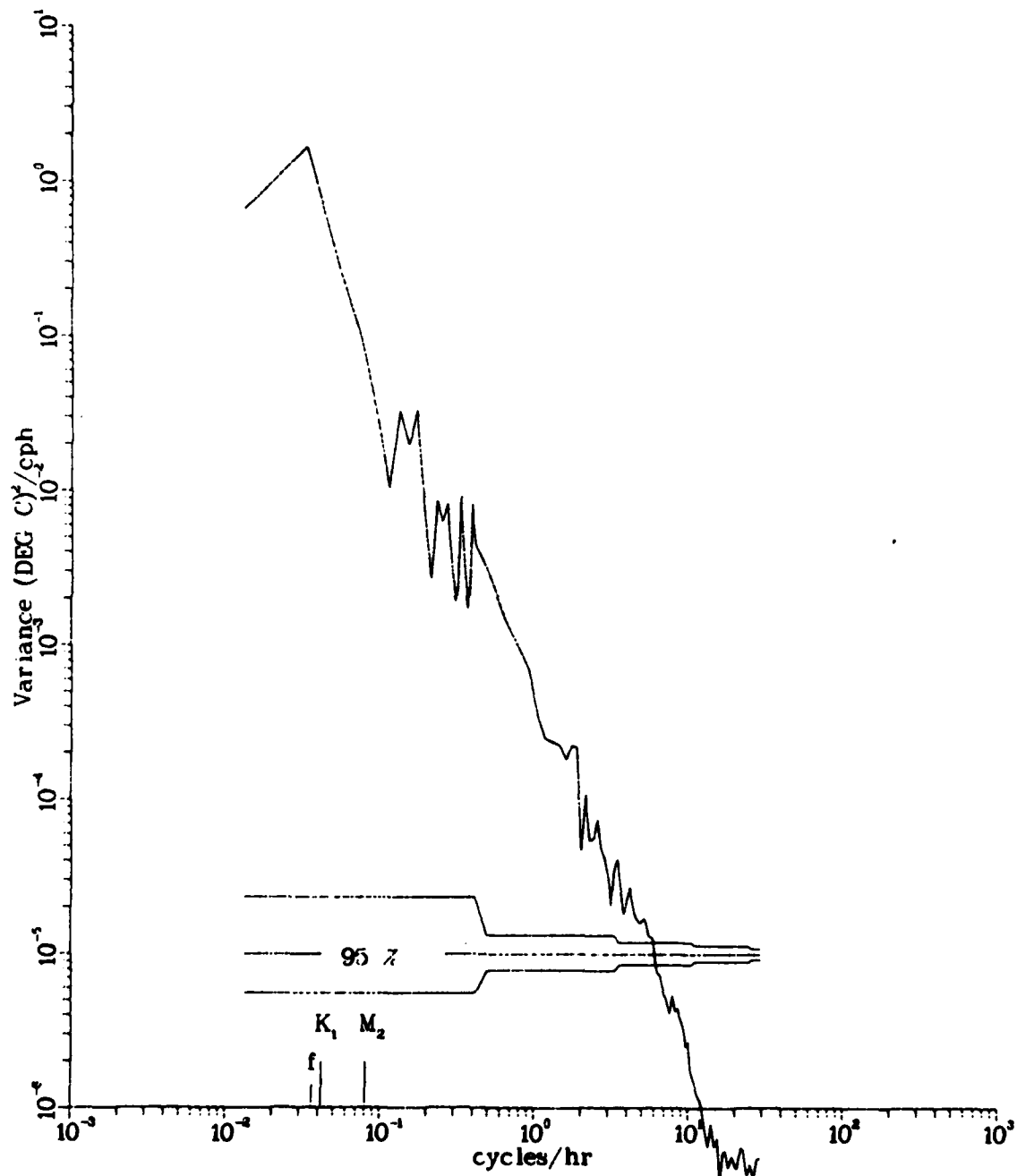


Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25.805555
 Long : -89.74165

Array : ATOM79
 Depth : 000183
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 250.

TEMPERATURE SPECTRUM

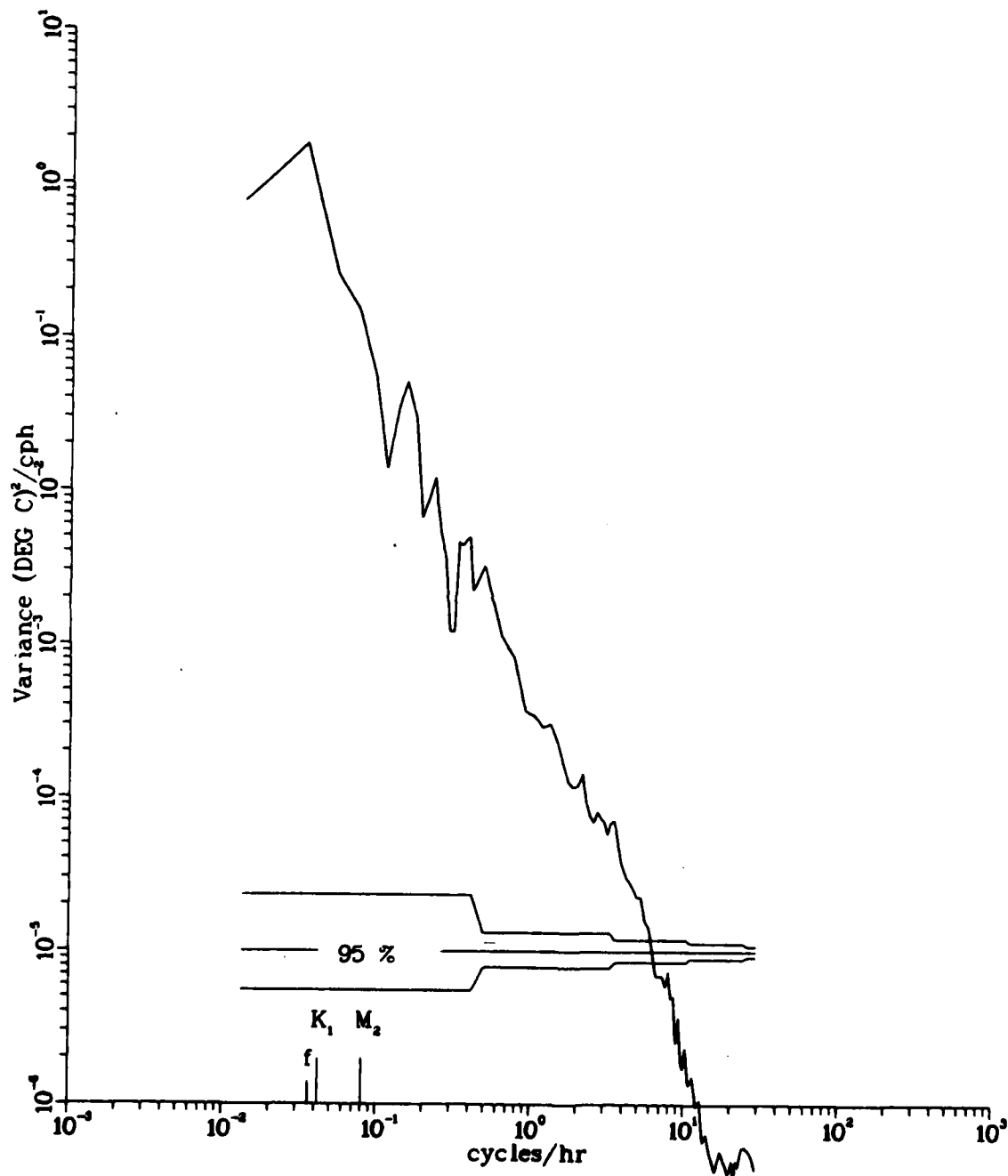


Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25 805555
 Long : -89 714165

Array : ATOM79
 Depth : 000200
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 251.

TEMPERATURE SPECTRUM



Variable : T
 File : ACM
 Meter : 790100
 Lat. : 25.805555
 Long. : -89.744165

Array : ATOM79
 Depth : 000207
 Start : 20 DEC 1979
 End : 26 DEC 1979

Figure 252.

4.0 STATION DATA

4.1 XBT Data - Deployment Cruise

4.1.1 Waterfall Plots - Temperature vs. Depth (Figures 253-256)

4.1.2 Waterfall Plots - High Passed Temperature vs. Depth (Figures 257-260)

XBT SEPARATION (nautical miles)

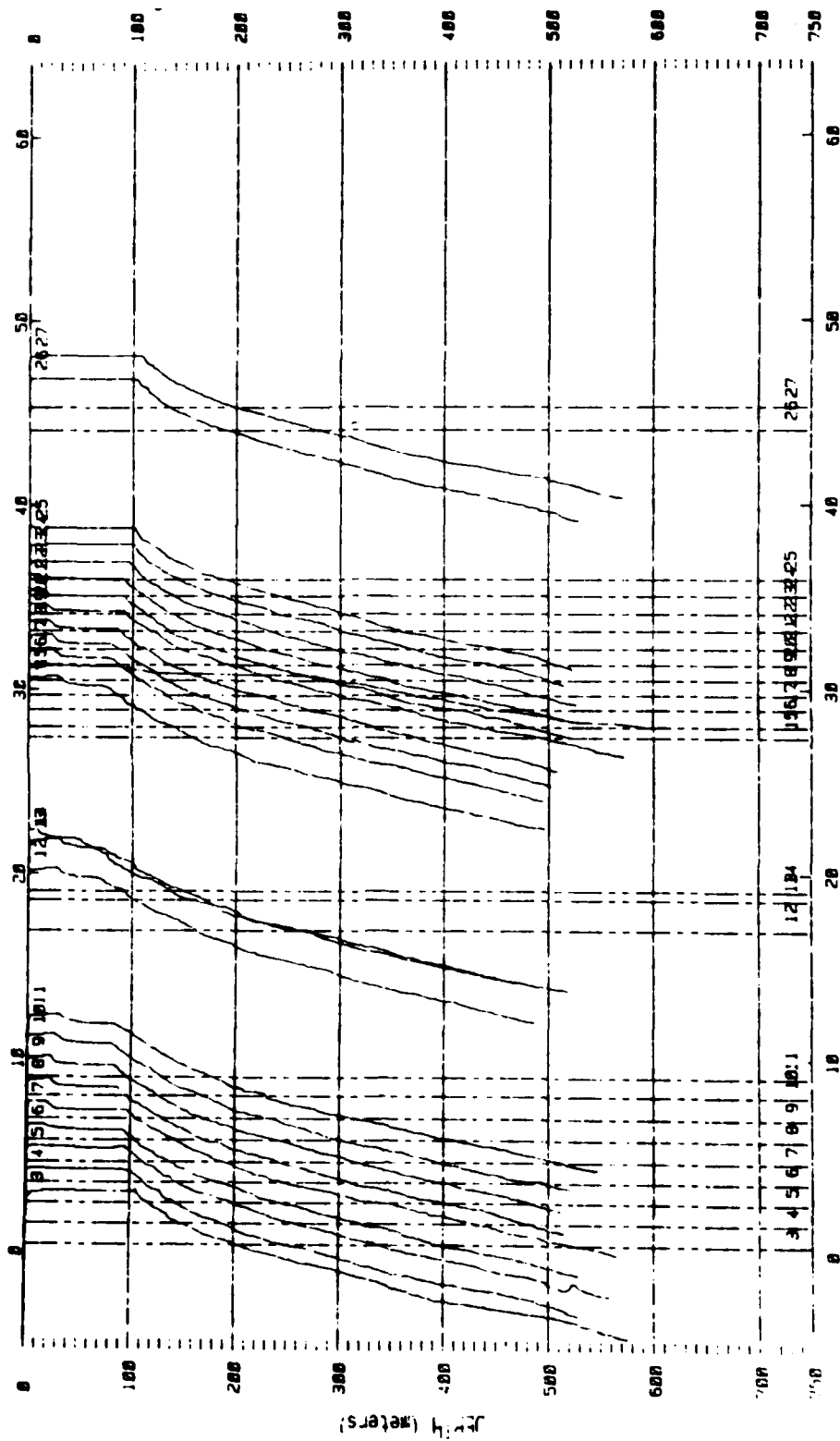


Figure 253.

XBT SEPARATION (nautical miles)

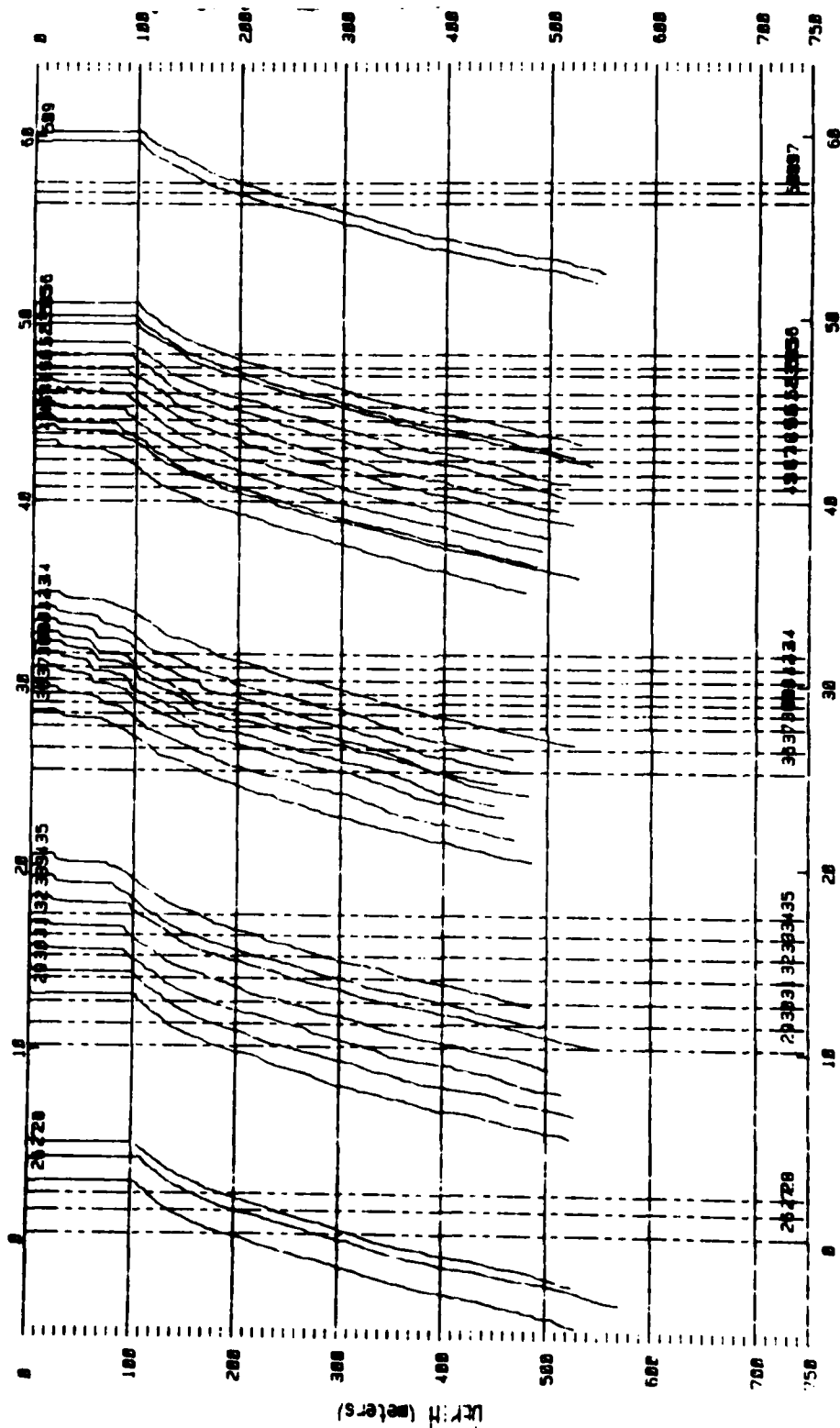


Figure 254.

XBT SEPARATION (nautical miles)

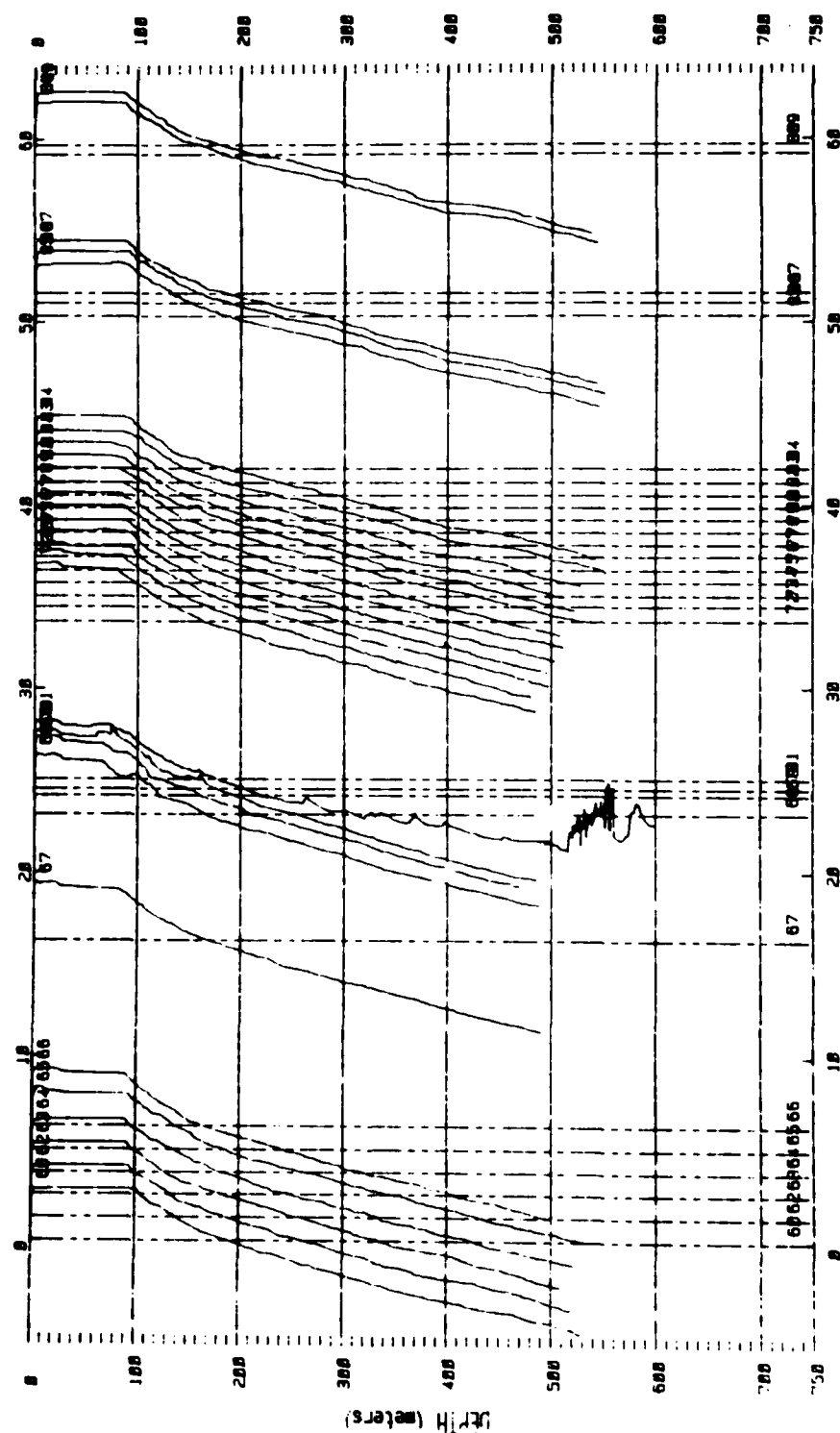


Figure 255.

XBT SEPARATION (nautical miles)

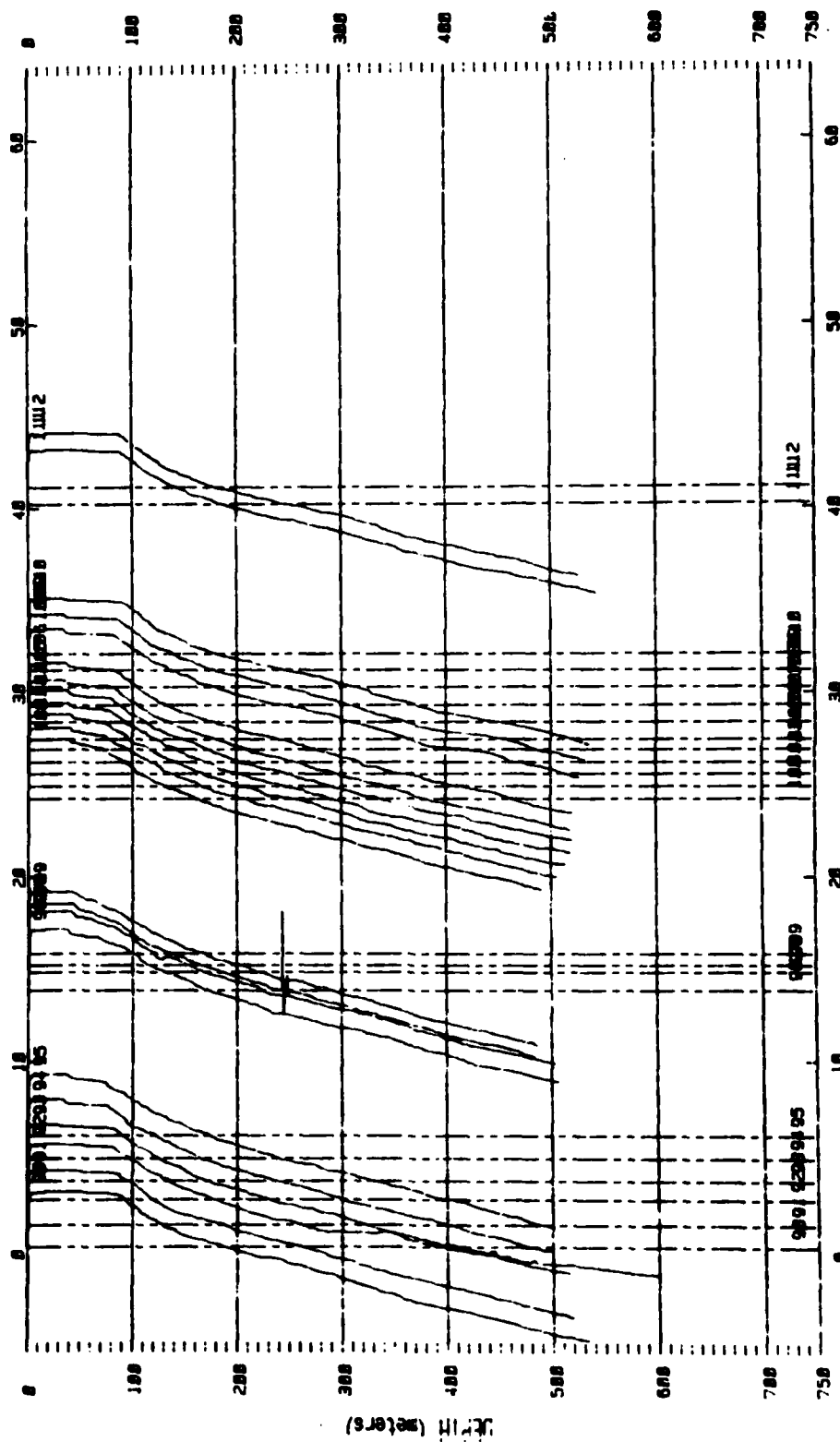


Figure 256.

XBT SEPARATION (nautical miles)

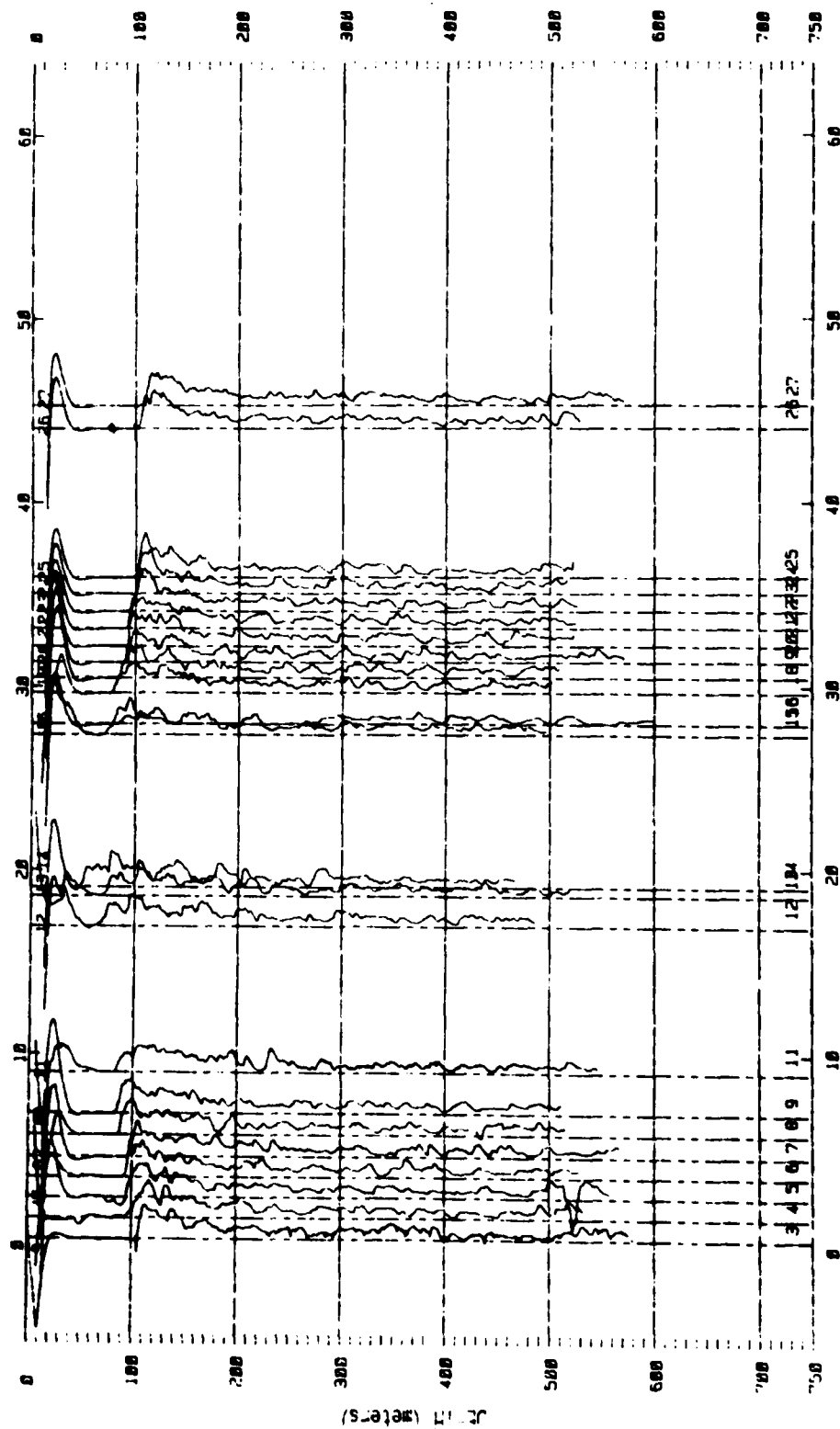


Figure 257.

XBT SEPARATION (nautical miles)

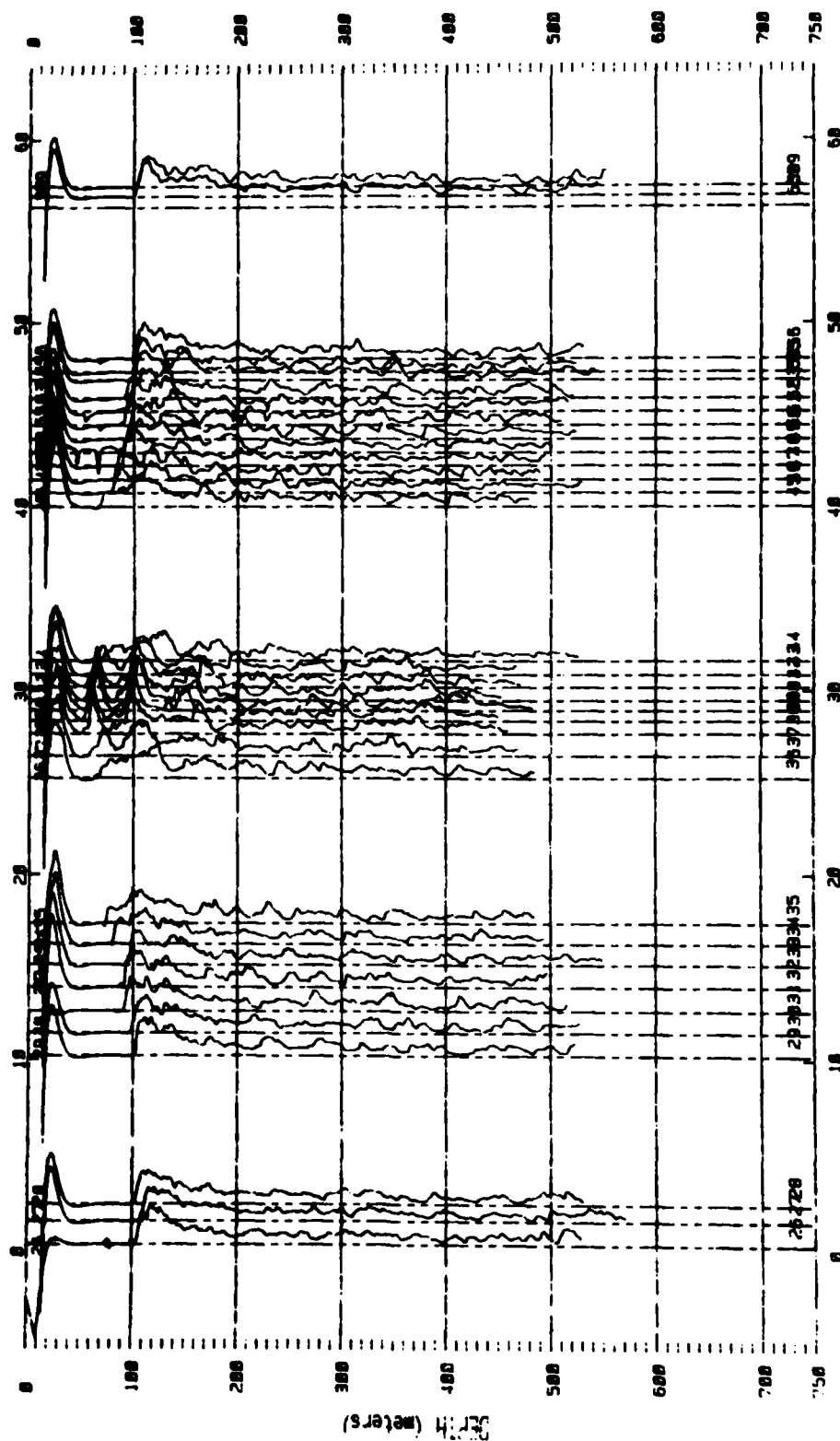


Figure 258.

XBT SEPARATION (nautical miles)

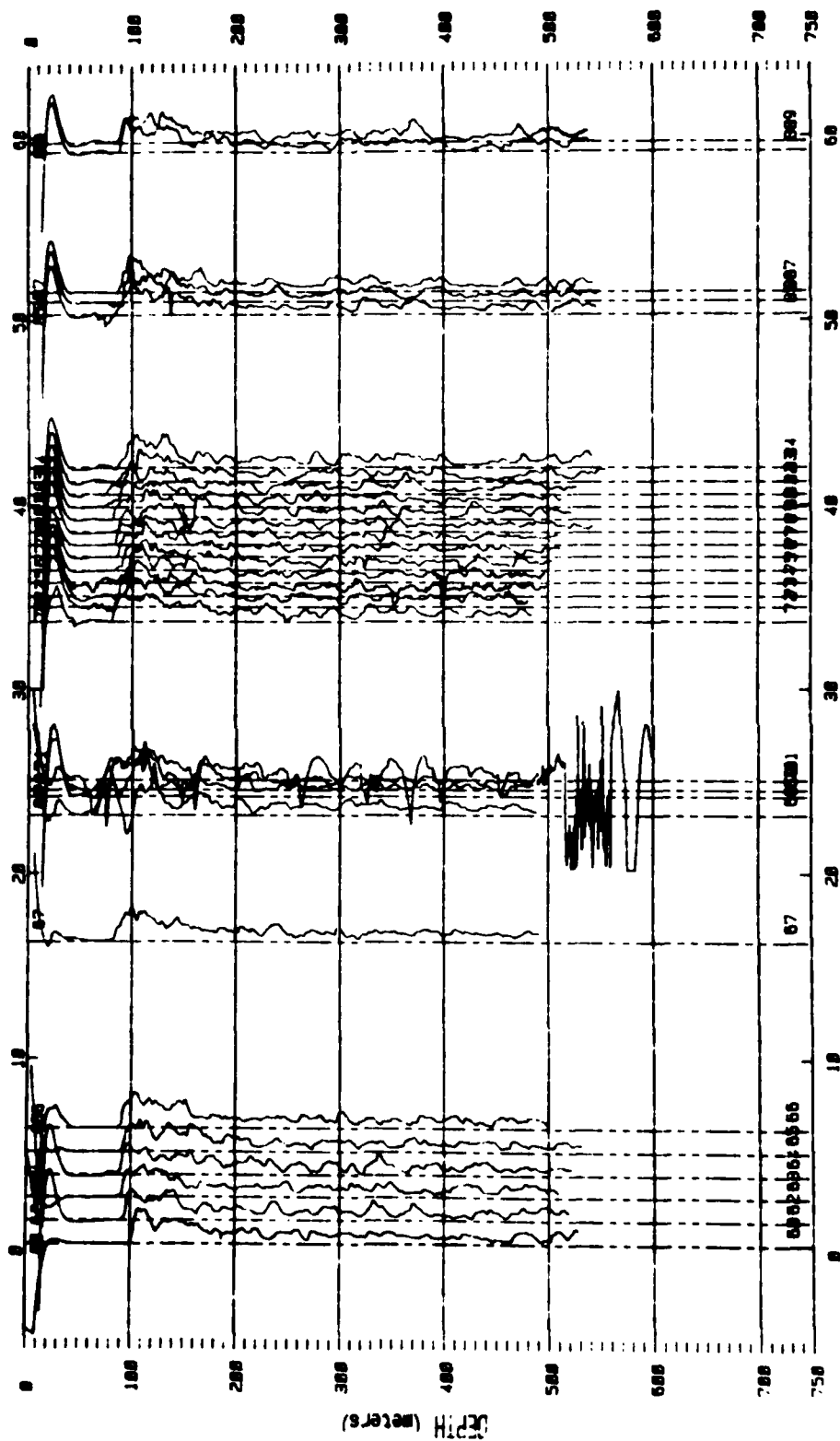


Figure 259.

XBT SEPARATION (nautical miles)

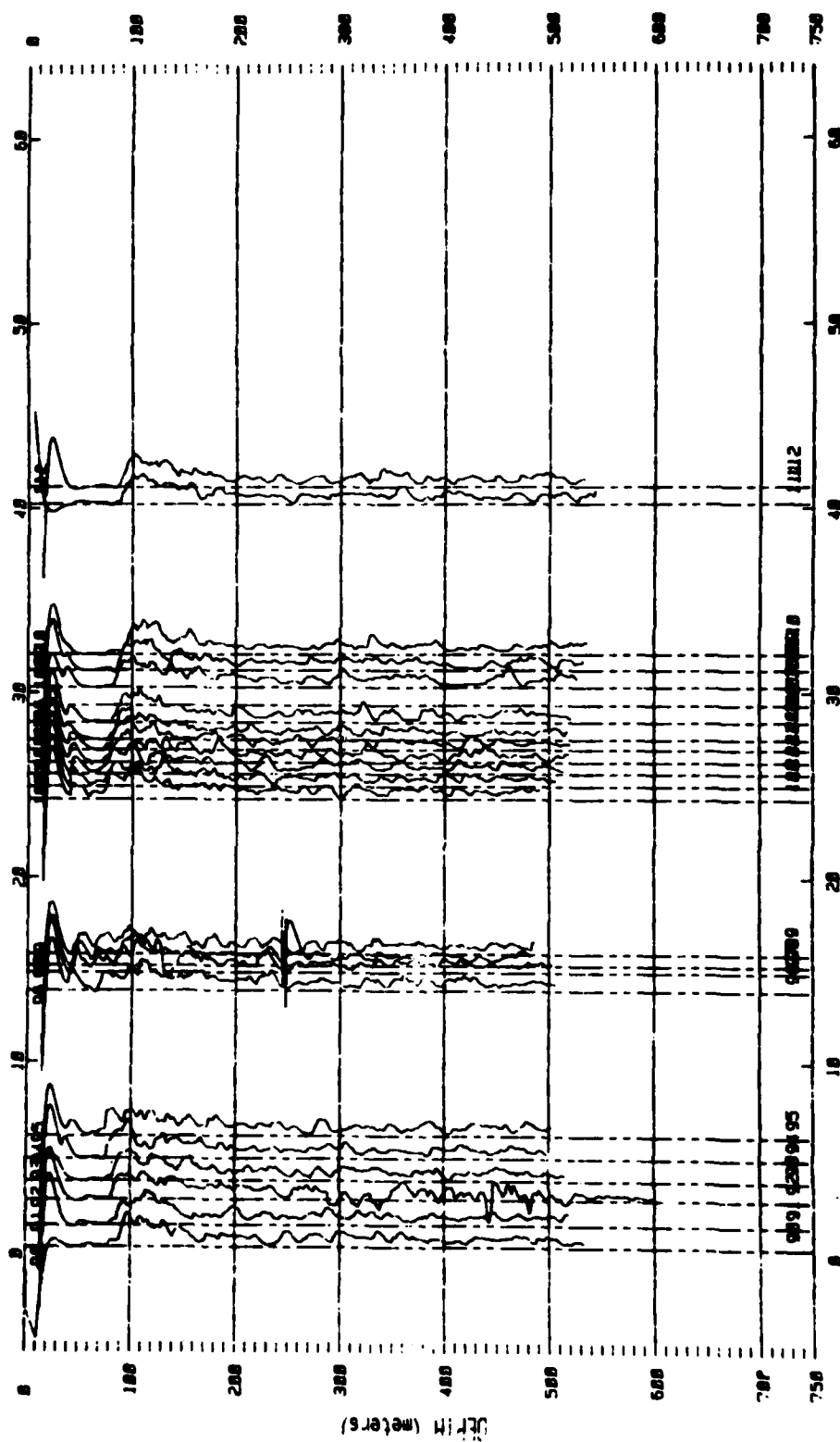


Figure 260.

4.2 XBT Data - Recovery Cruise

4.2.1 Waterfall Plots - Temperature vs. Depth (Figures 261-268)

4.2.2 Waterfall Plots - High Passed Temperature vs. Depth (Figures 269-276)

XBT SEPARATION (nautical miles)

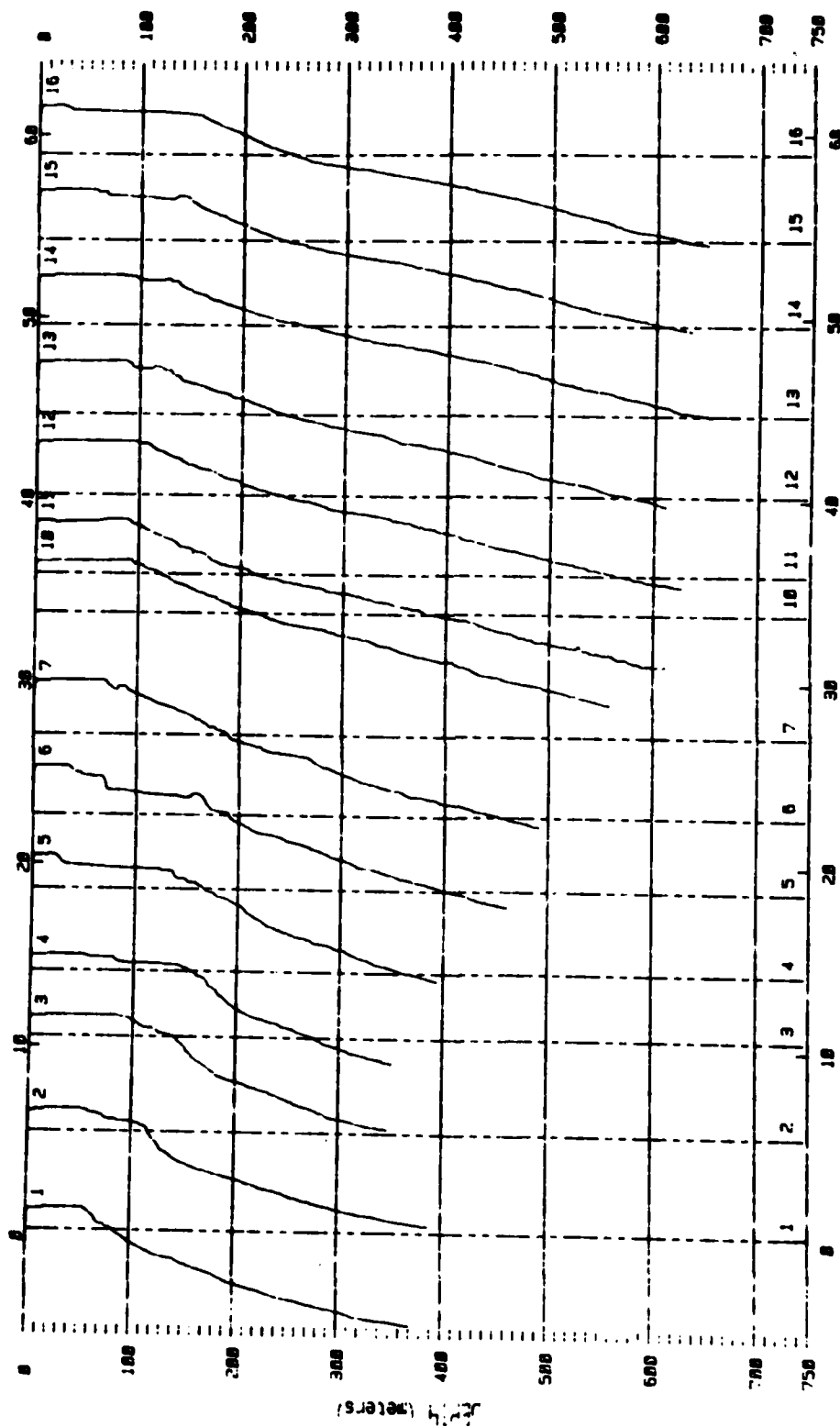


Figure 261.

XBT SEPARATION (nautical miles)

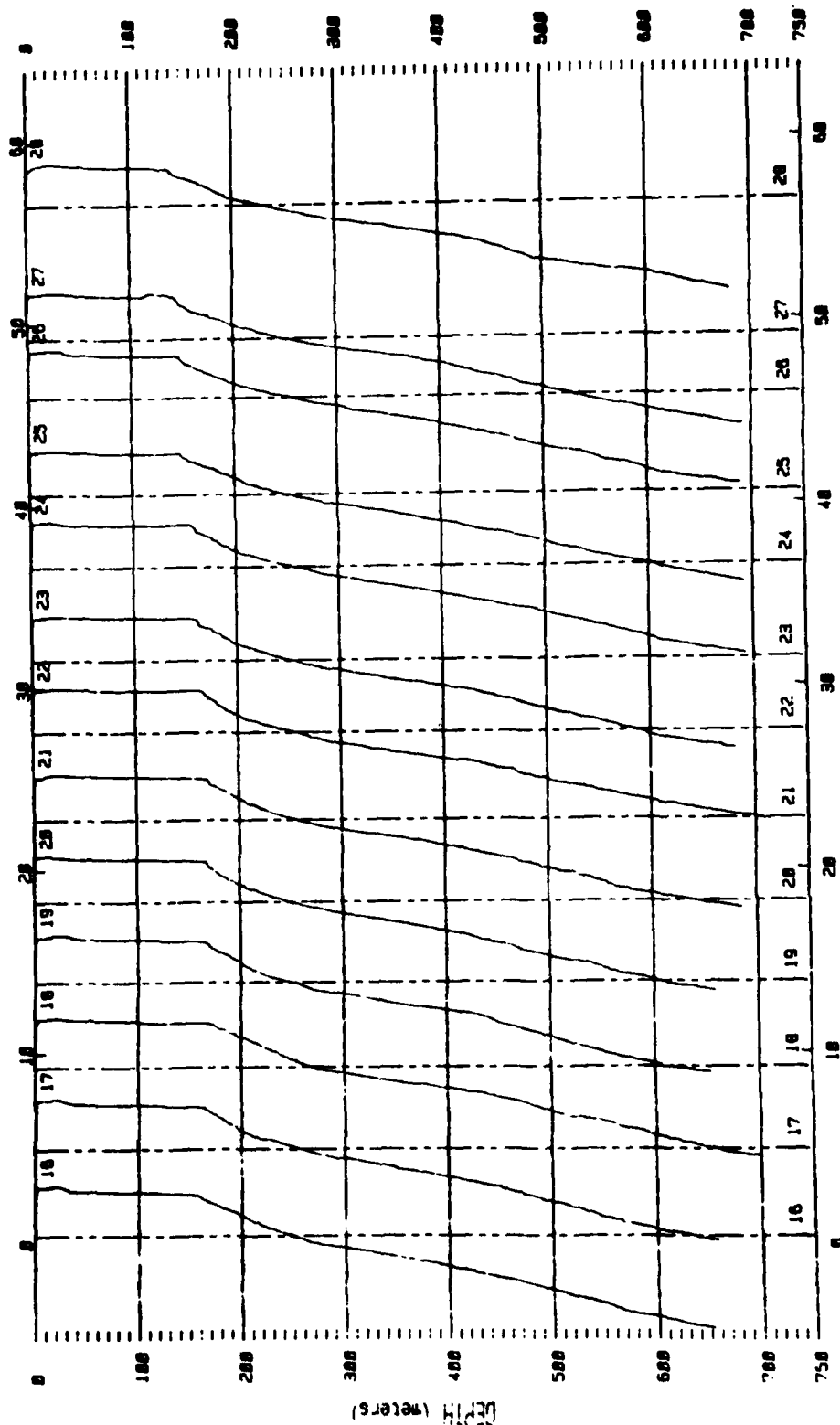


Figure 262.

XBT SEPARATION (nautical miles)

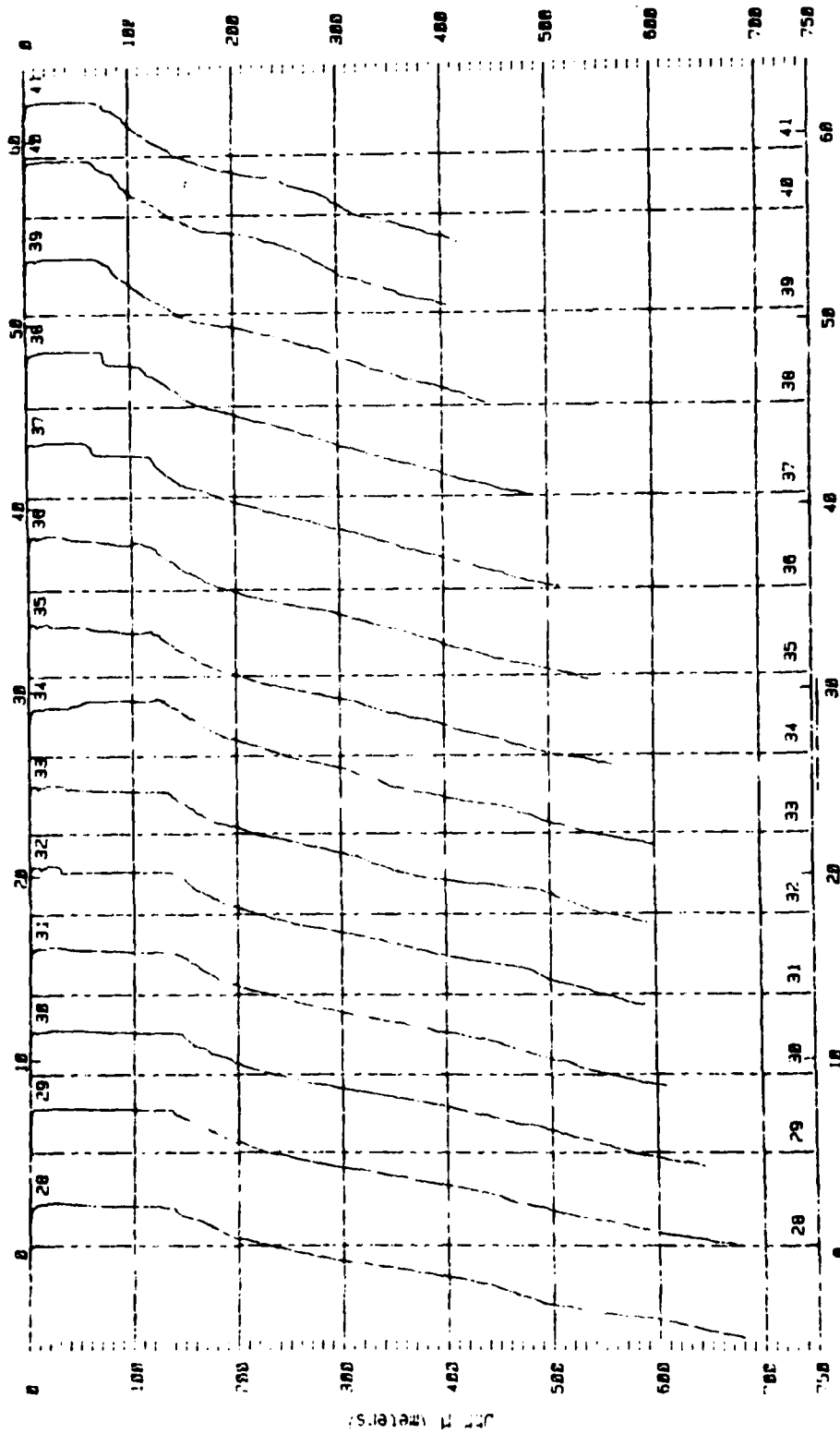


Figure 263.

XBT SEPARATION (nautical miles)

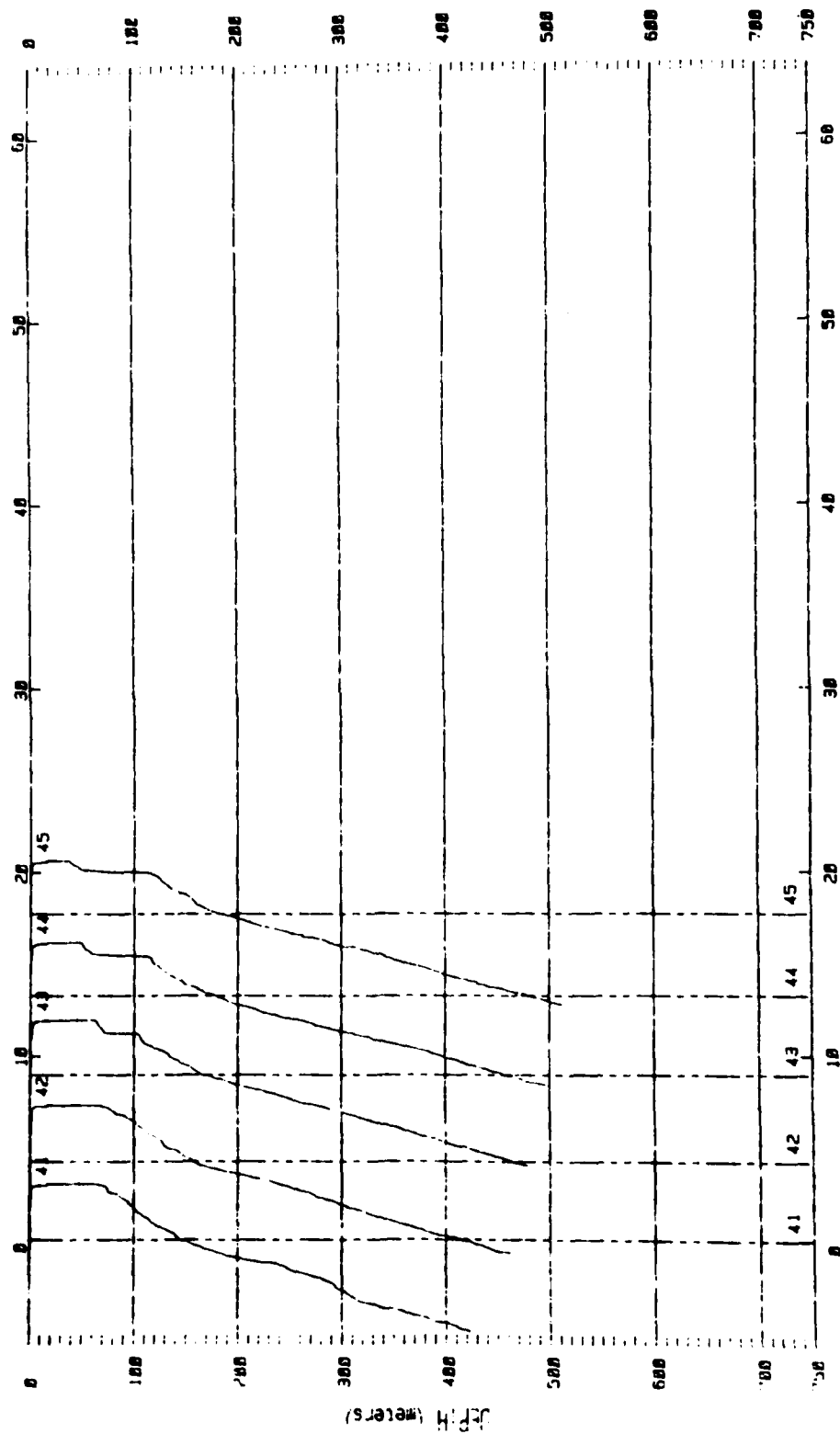


Figure 264.

XBT SEPARATION (nautical miles)

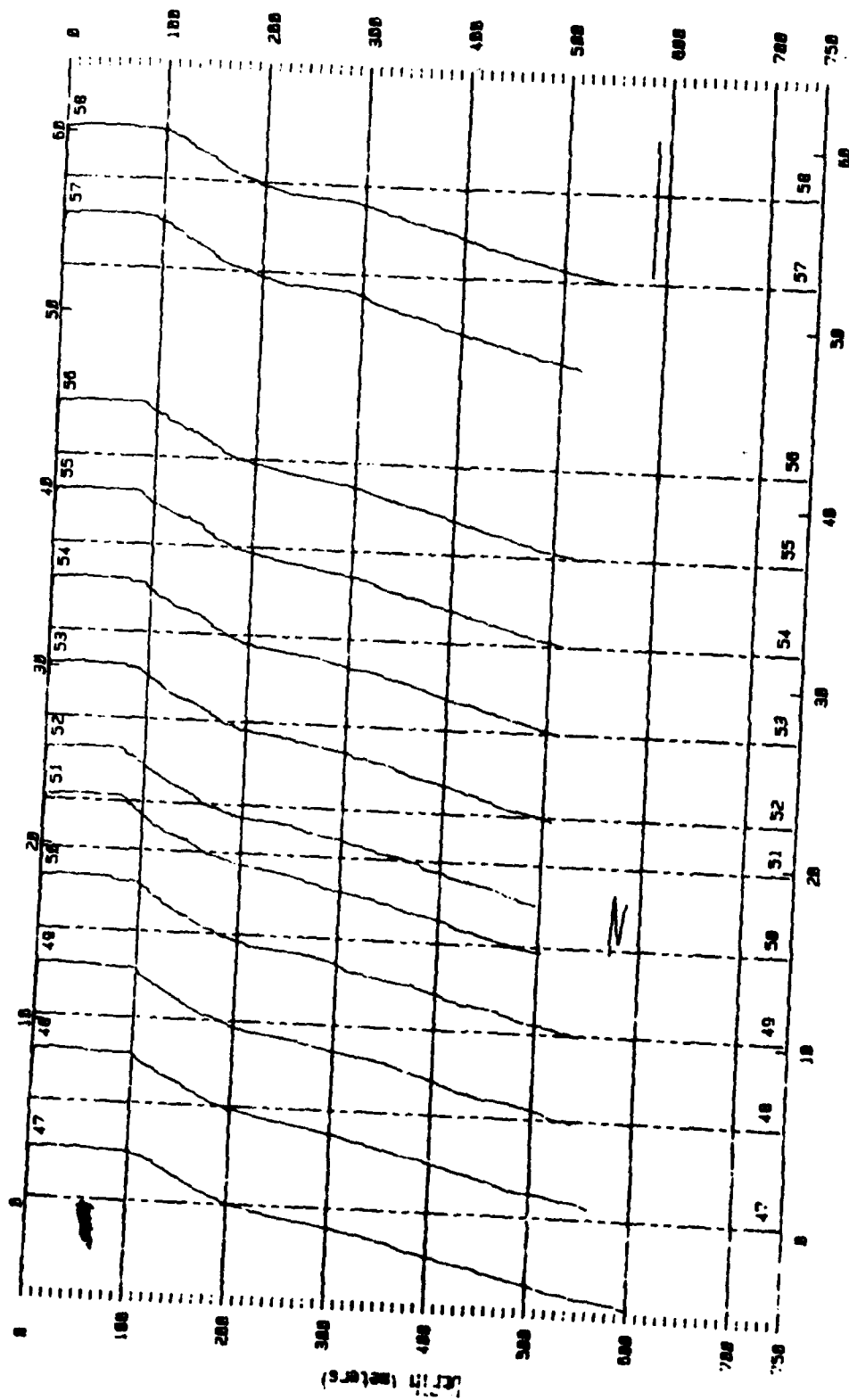


Figure 265.

XBT SEPARATION (nautical miles)

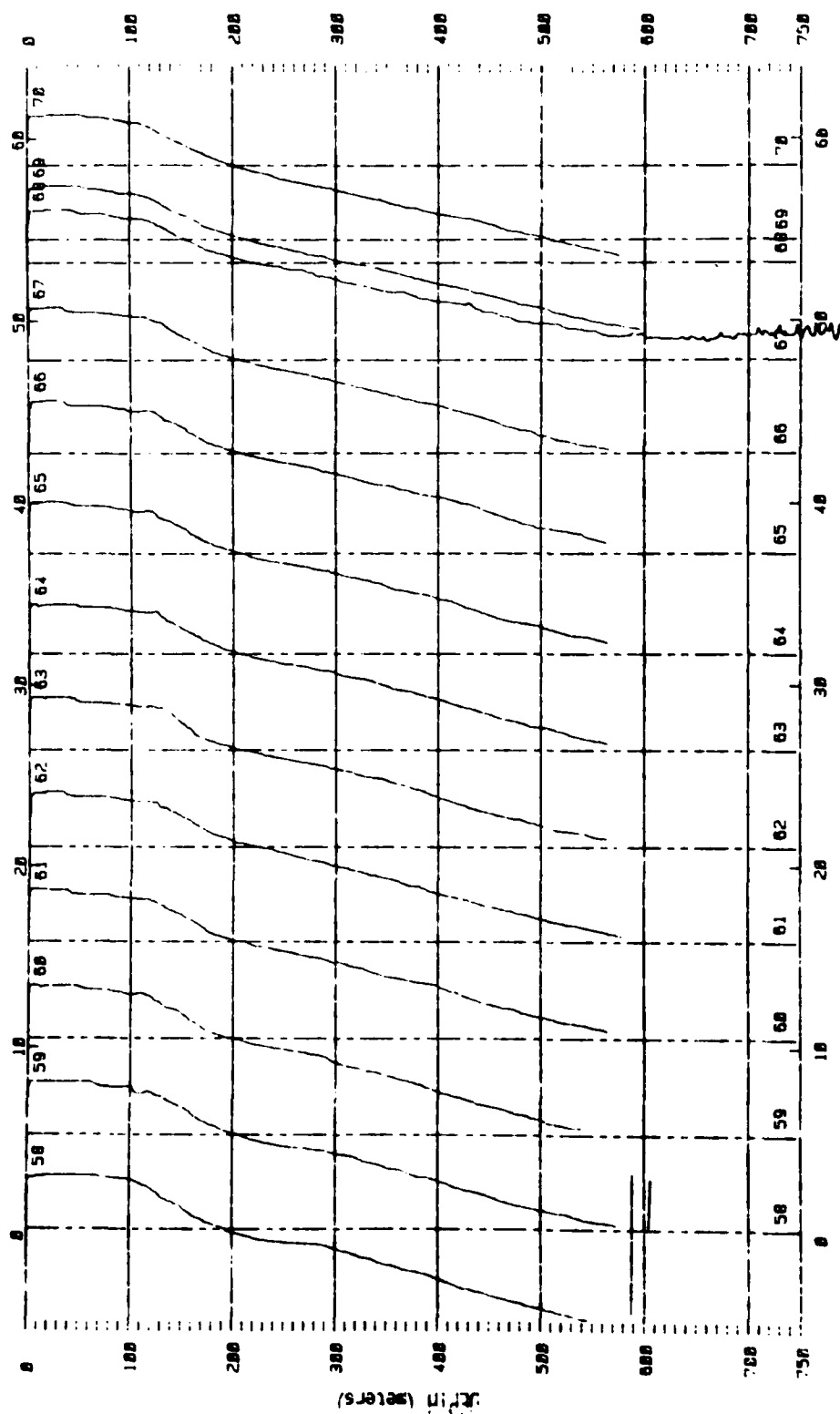


Figure 266.

XBT SEPARATION (nautical miles)

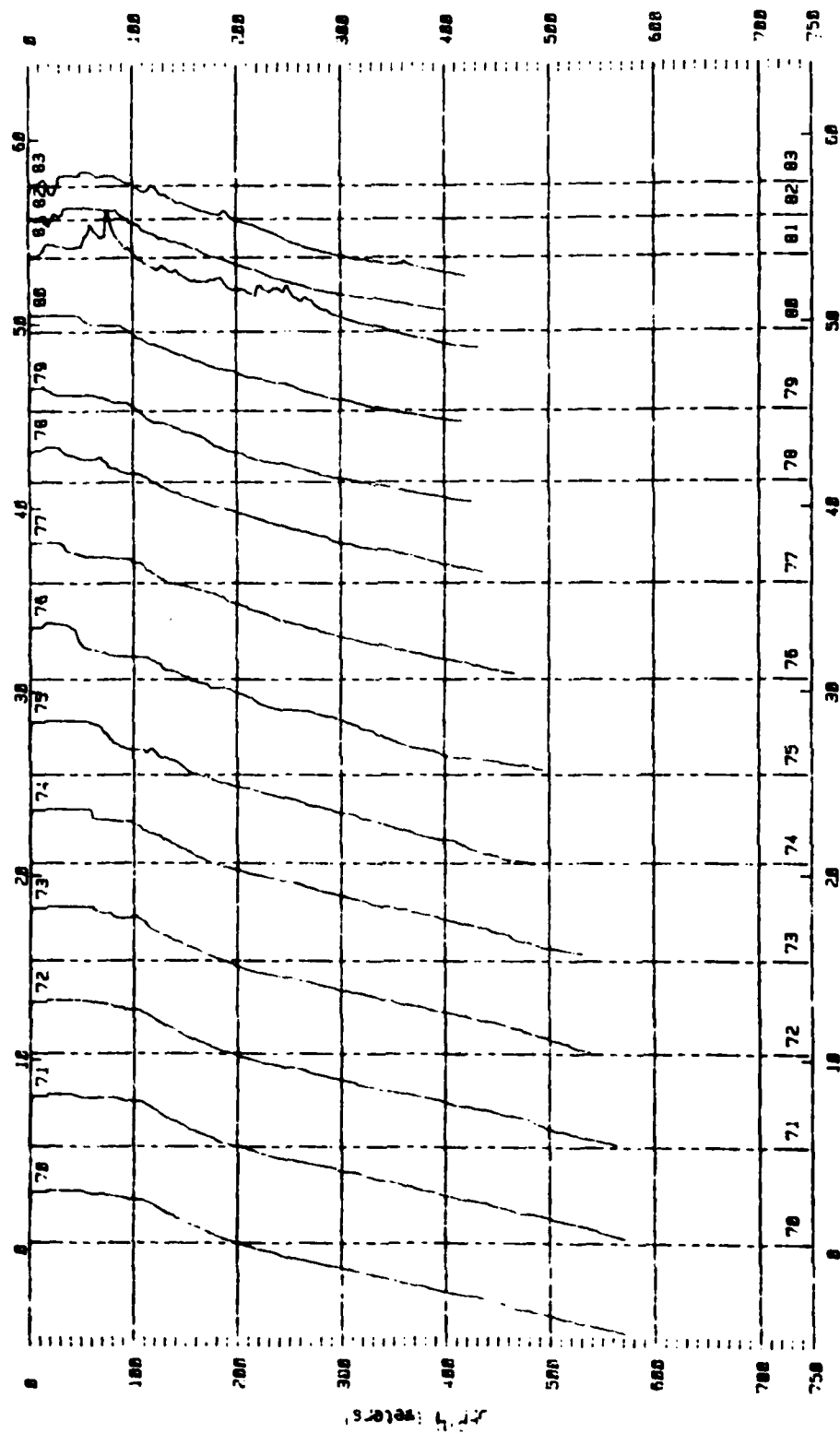


Figure 267.

AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL 8--ETC F/8 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
UNCLASSIFIED NORDA-TN-85

NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC F/B B/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M T BERGIN
NORDA-TN-85

ML

4 17 7

$$\frac{AC}{BC} = \frac{AF}{BF}$$

XBT SEPARATION (nautical miles)

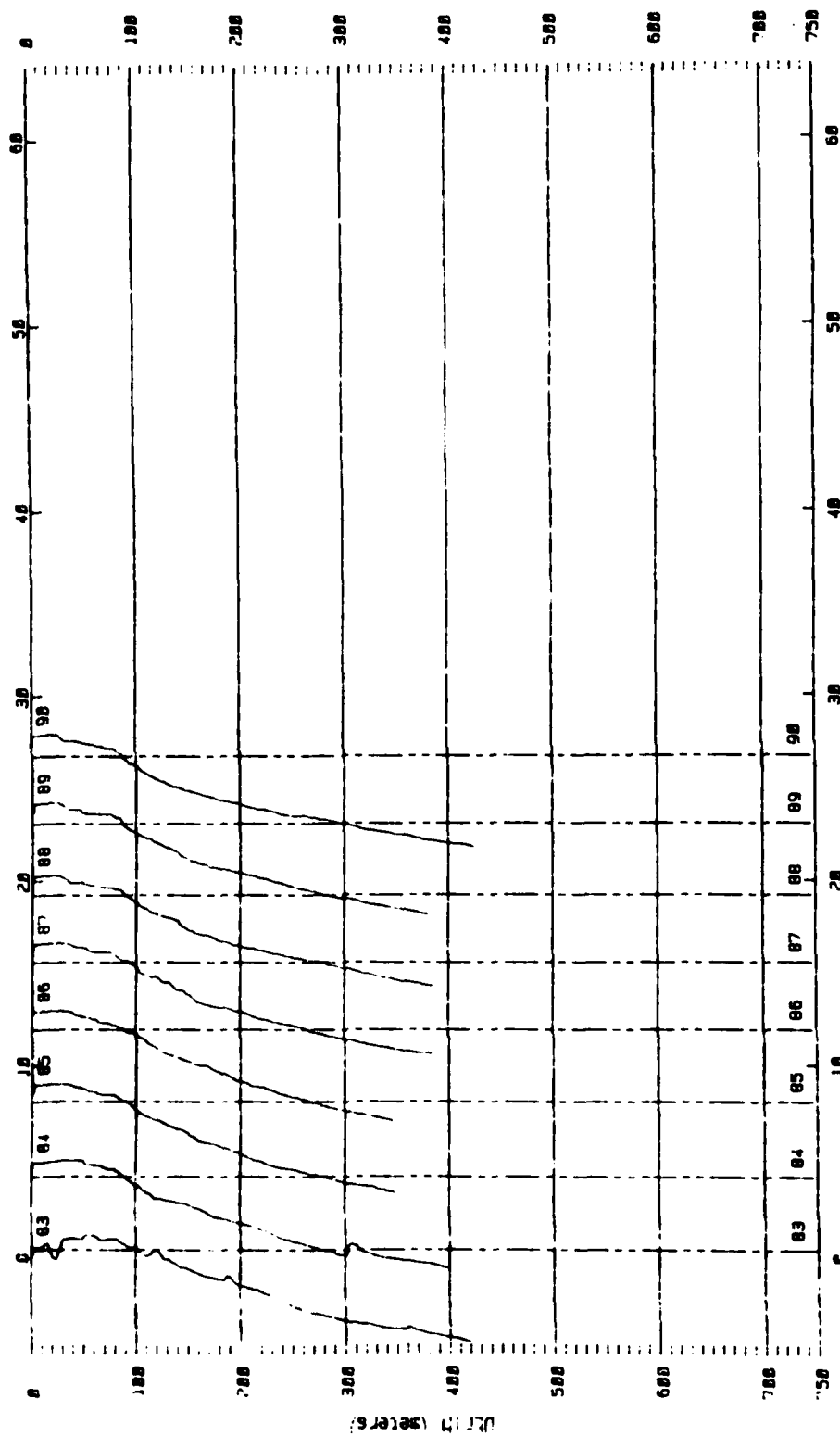


Figure 268.

XBT SEPARATION (nautical miles)

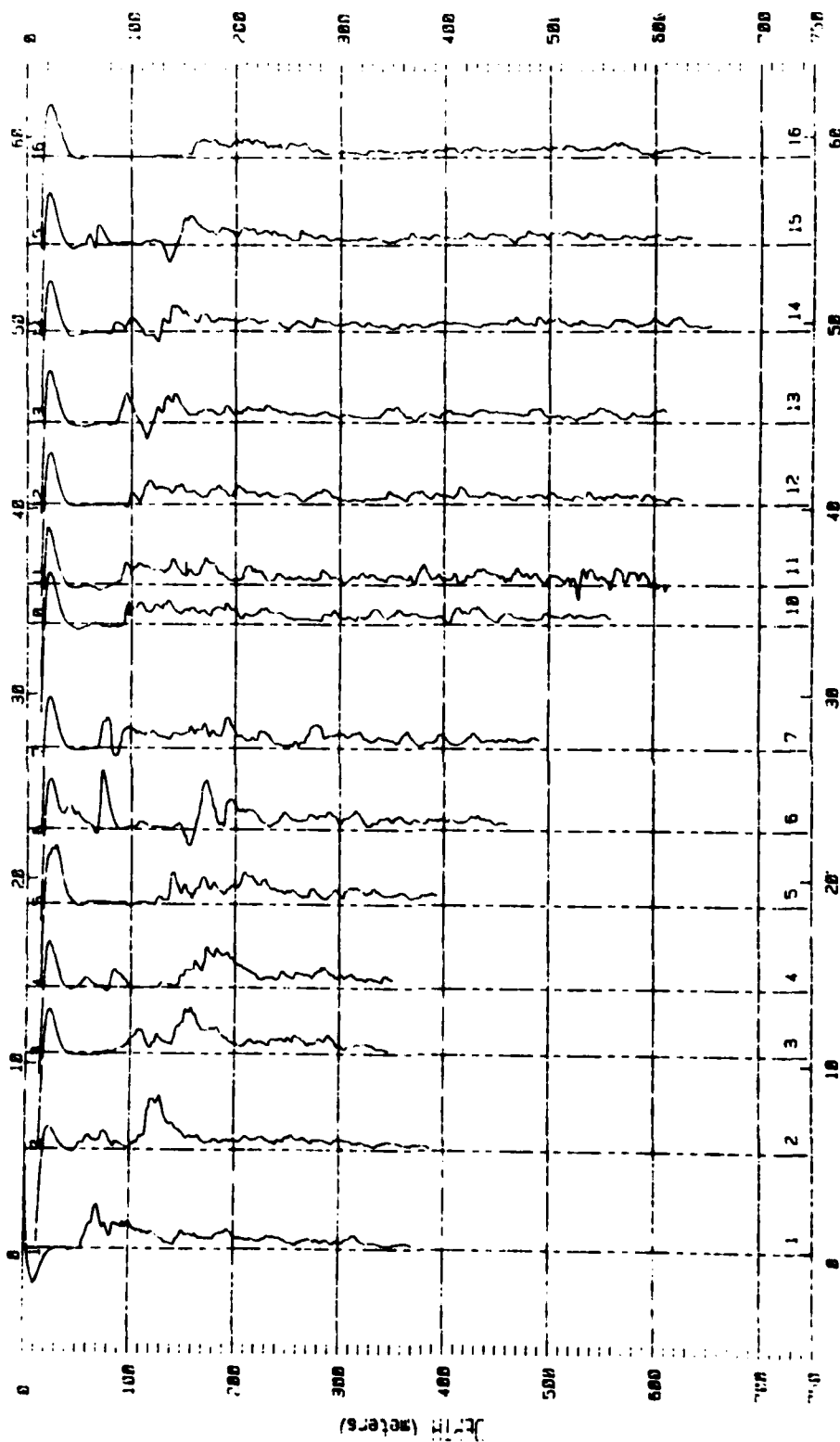


Figure 269.

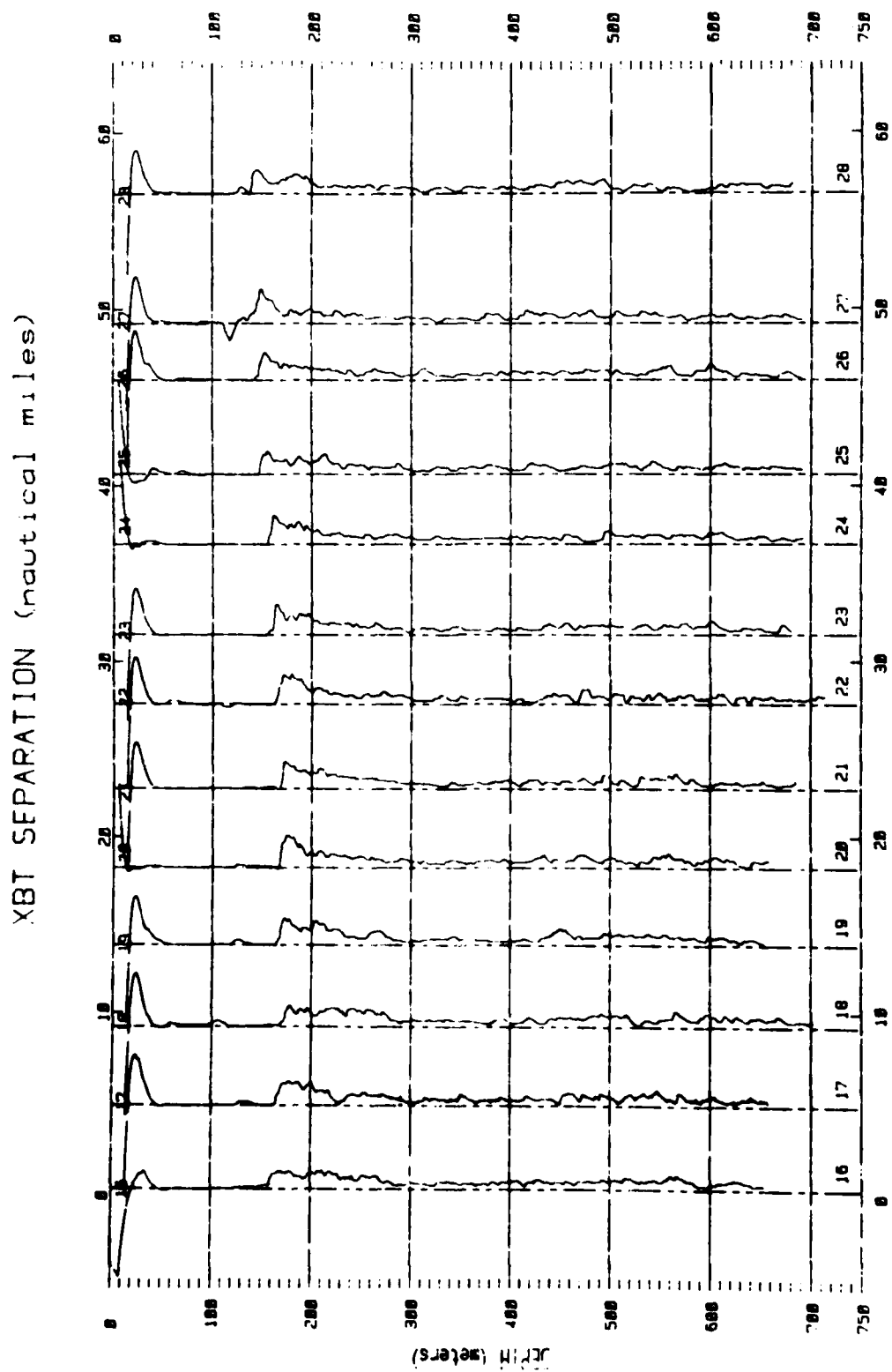


Figure 270.

XBT SEPARATION (nautical miles)

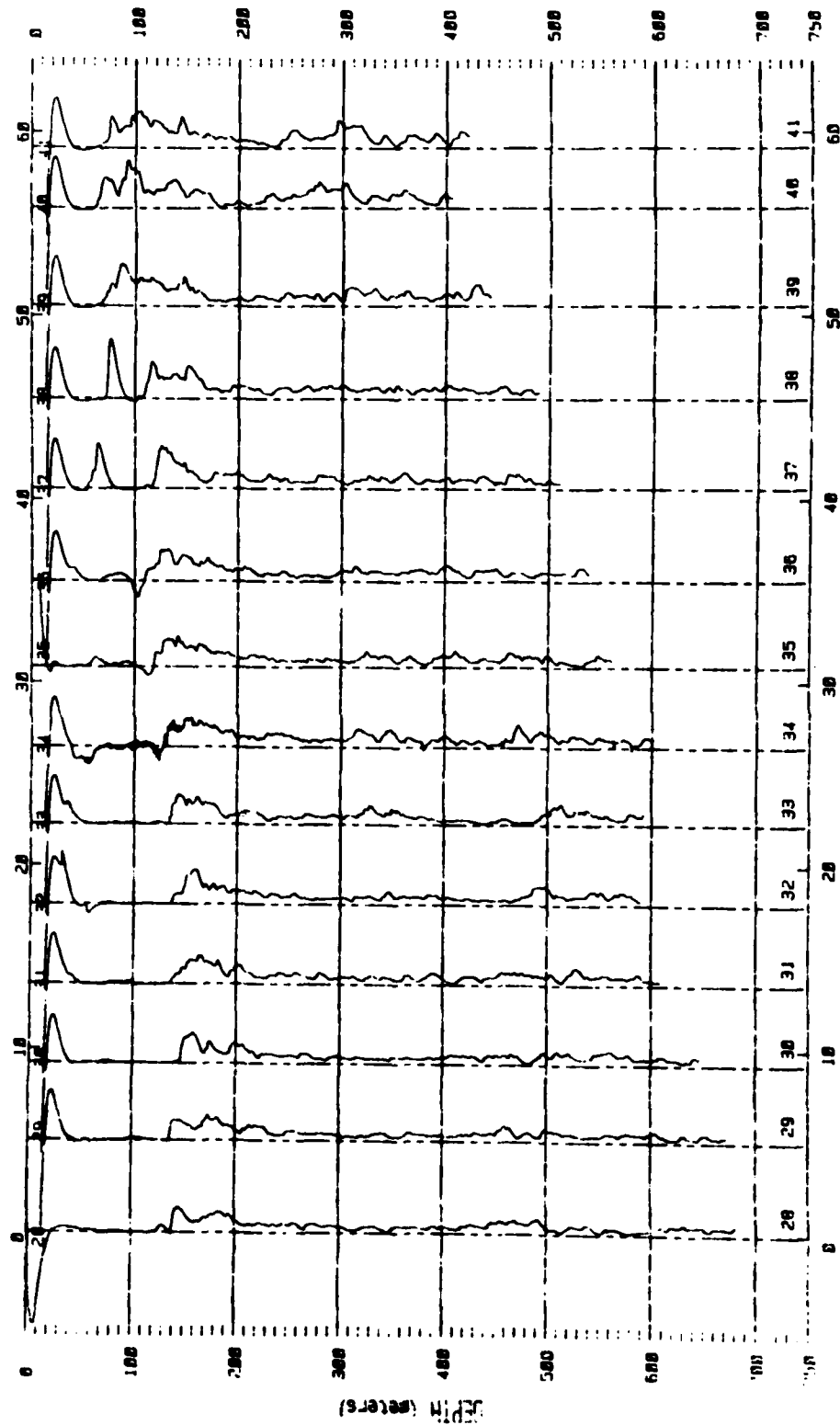


Figure 271.

XBT SEPARATION (nautical miles)

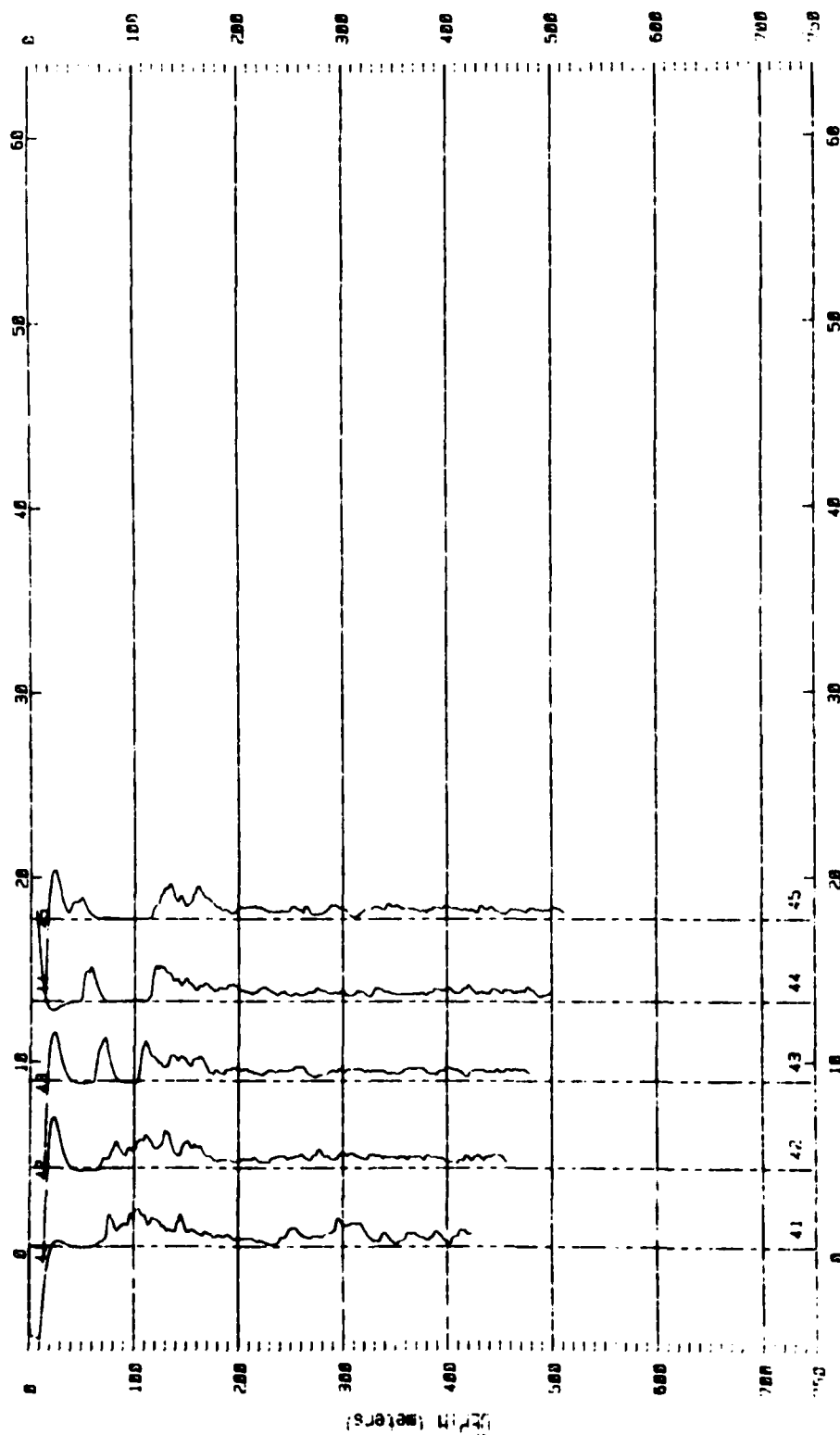


Figure 272.

XBT SEPARATION (nautical miles)

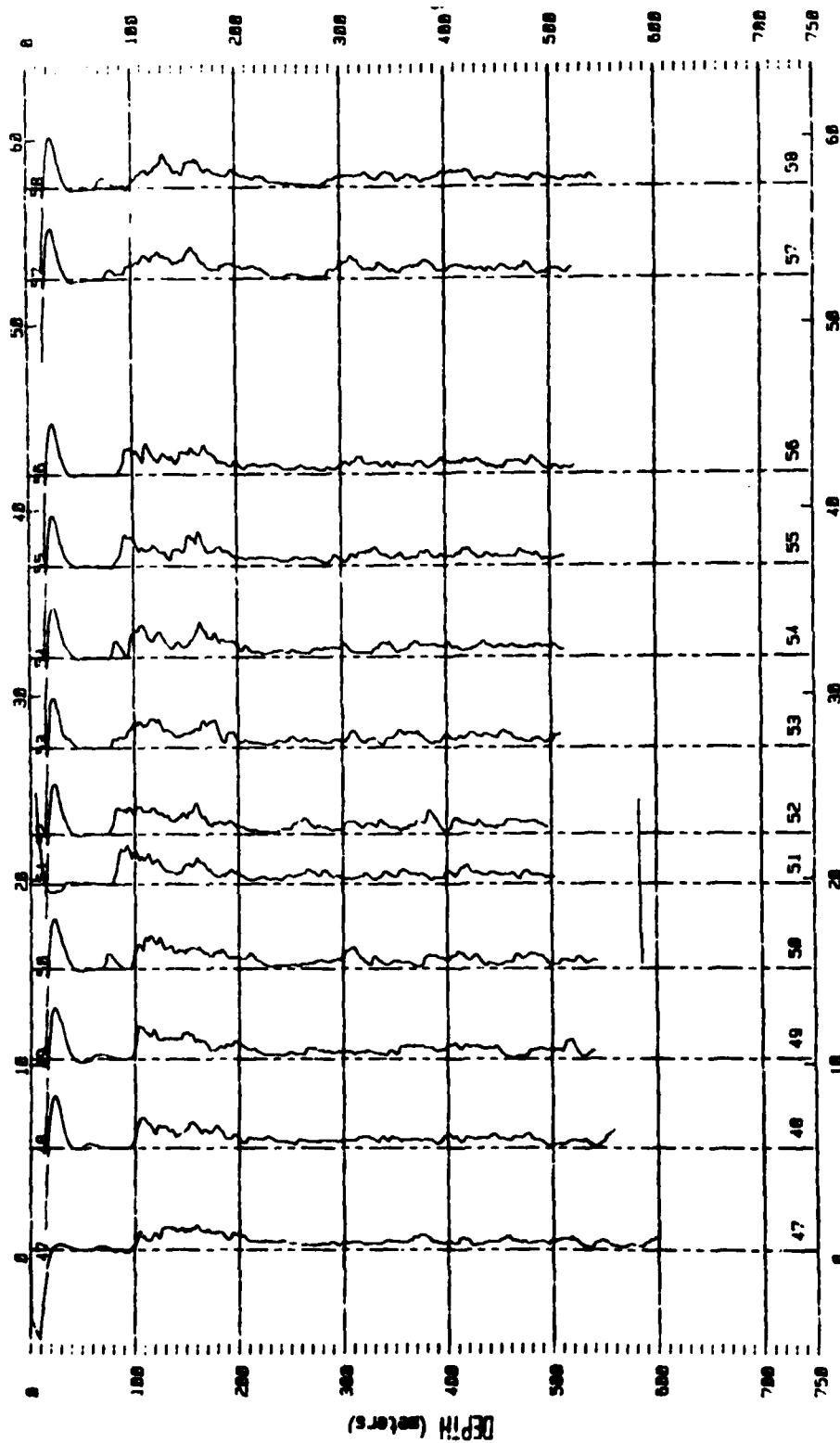


Figure 273.

XBT SEPARATION (nautical miles)

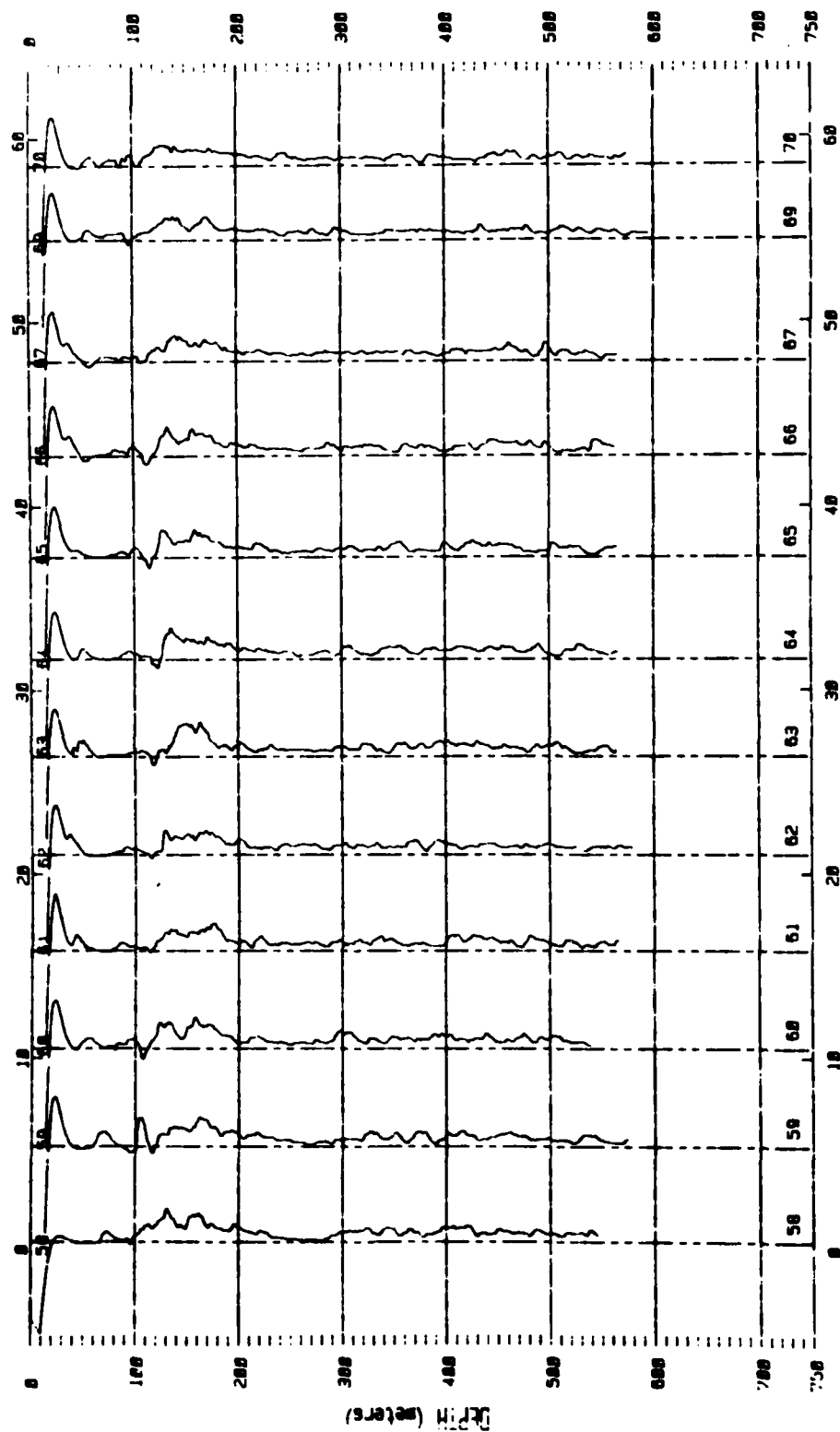


Figure 274.

XBT SEPARATION (nautical miles)

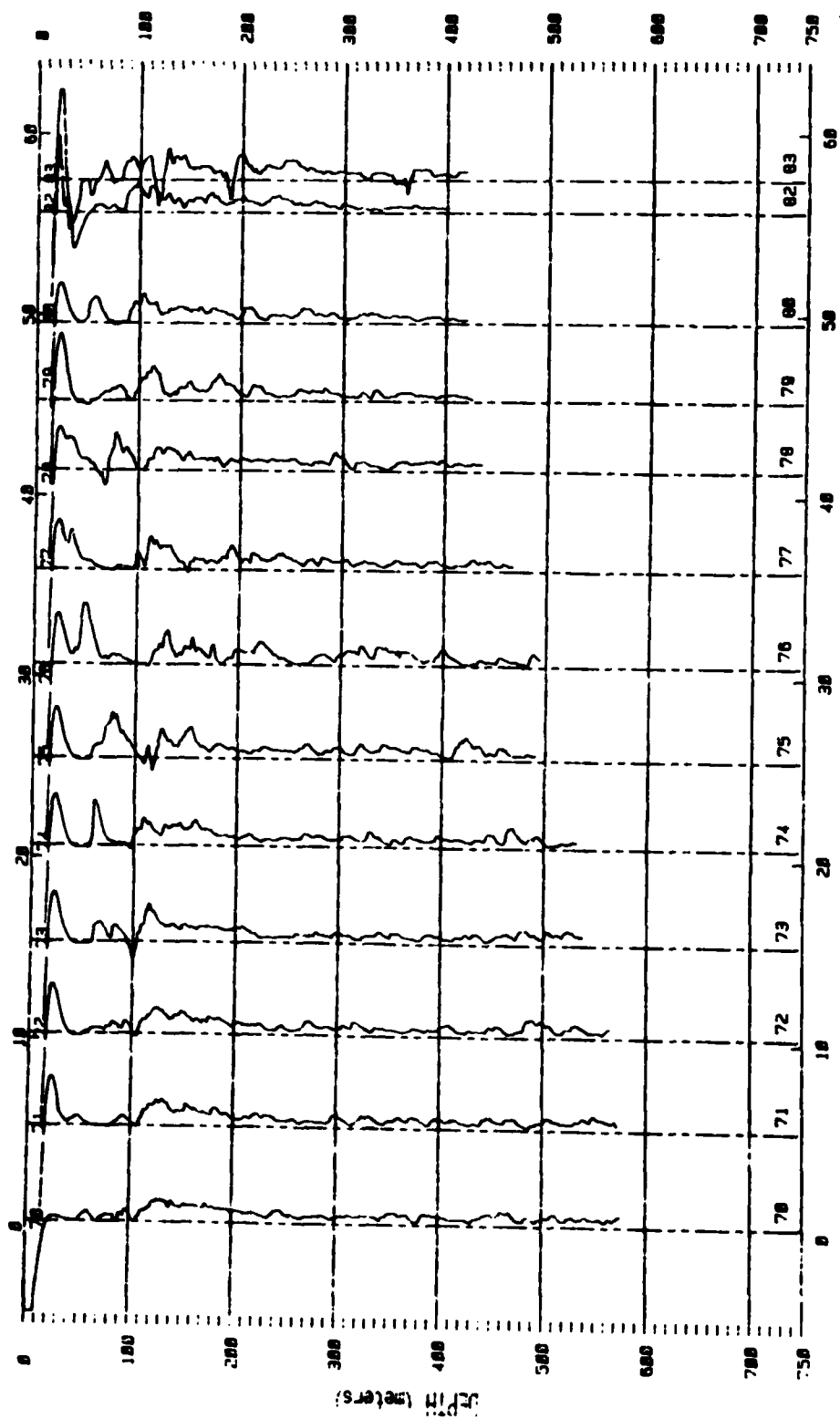


Figure 275.

XBT SEPARATION (nautical miles)

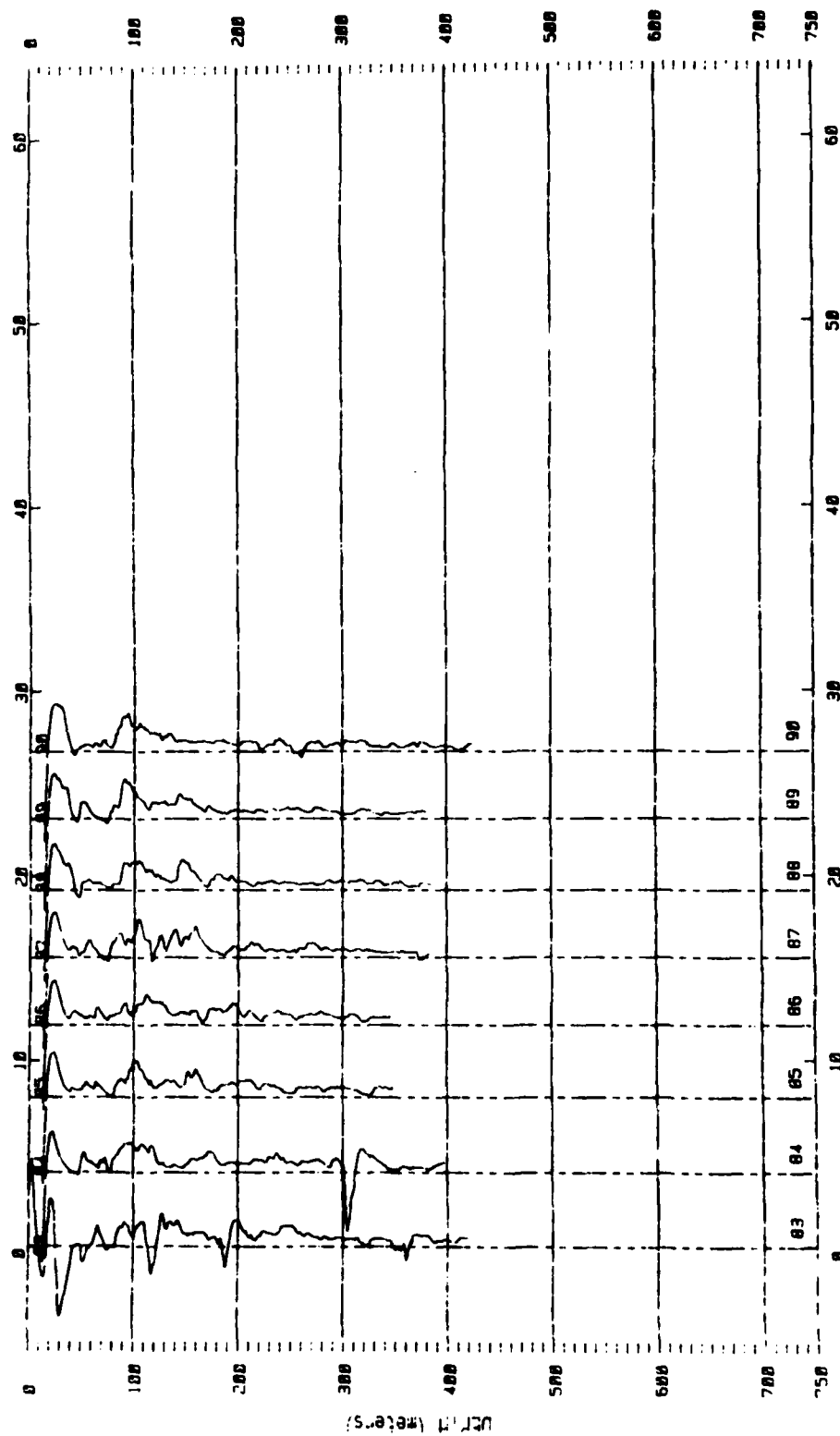


Figure 276.

4.3 CTD Data - Deployment Cruise

4.3.1 Temperature and Salinity vs. Depth (Figures 277-307)

4.3.2 Brunt-Väisälä Frequency and Sigma-t vs. Depth (Figures 308-338)

4.3.3 Temperature vs. Salinity (Figures 339-369)

ATOM 79 DEPLOYMENT
STATION 100001

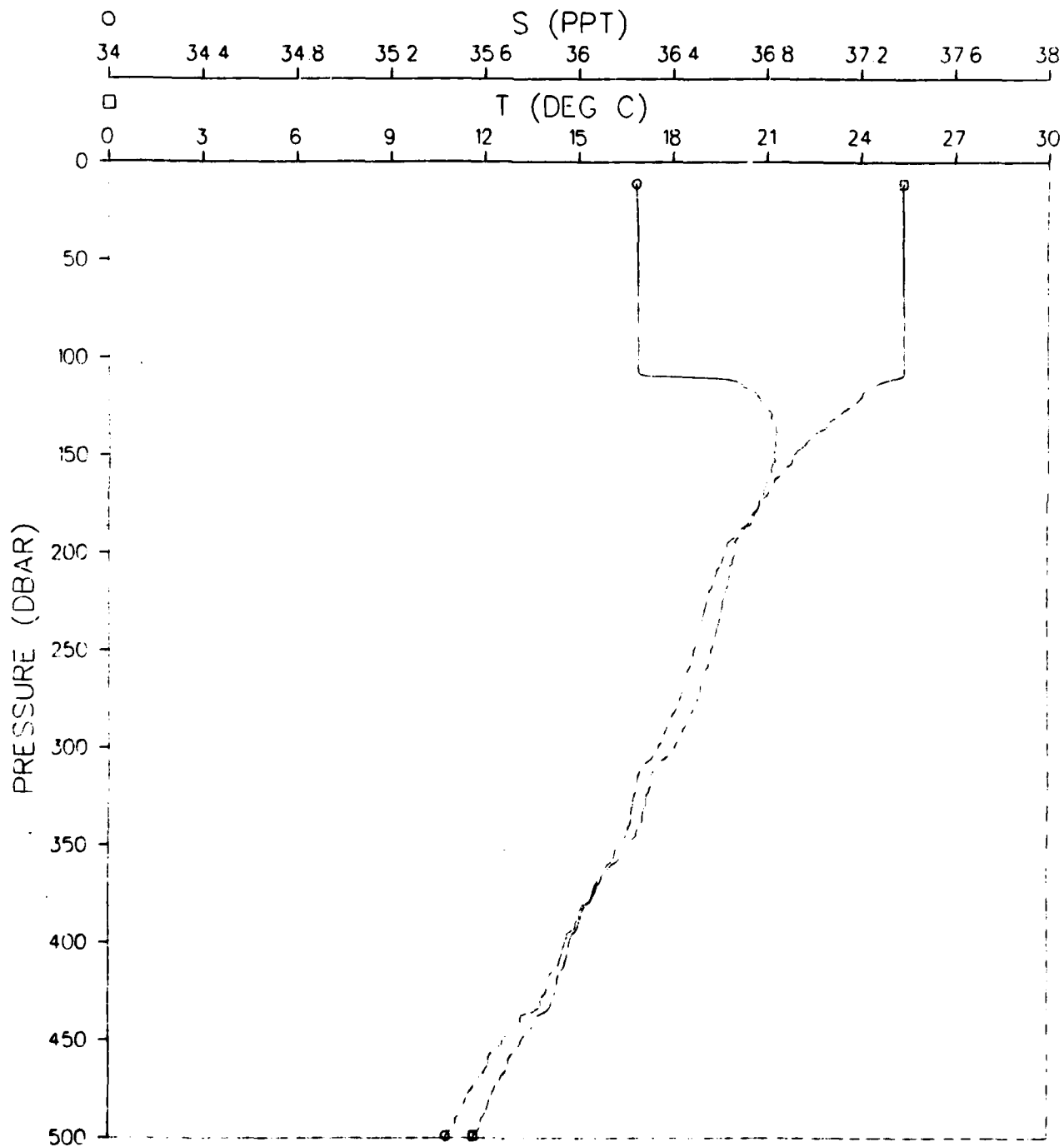


Figure 277.

ATOM 79 DEPLOYMENT
STATION 100005

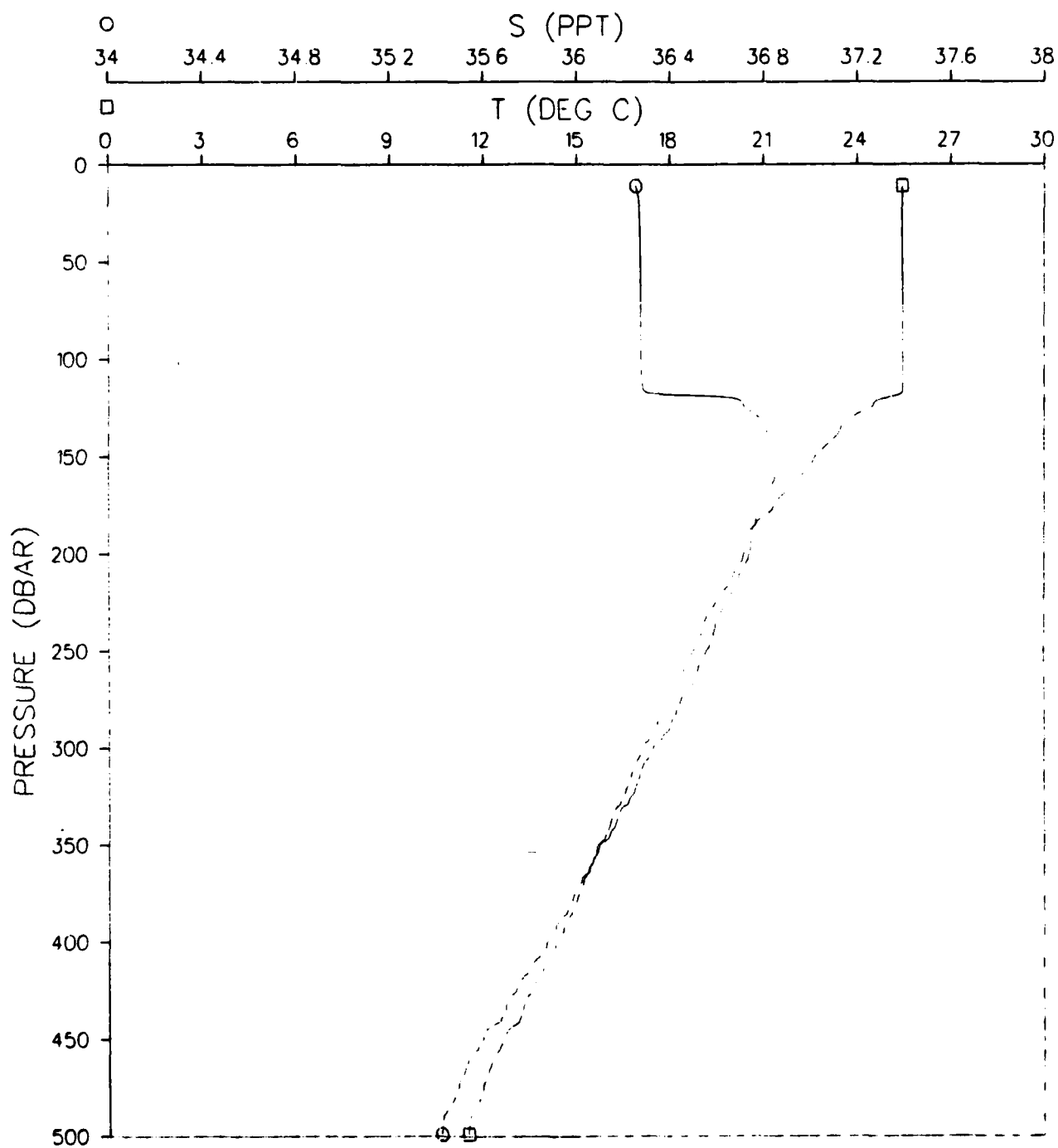


Figure 278.

ATOM 79 DEPLOYMENT
STATION 100006

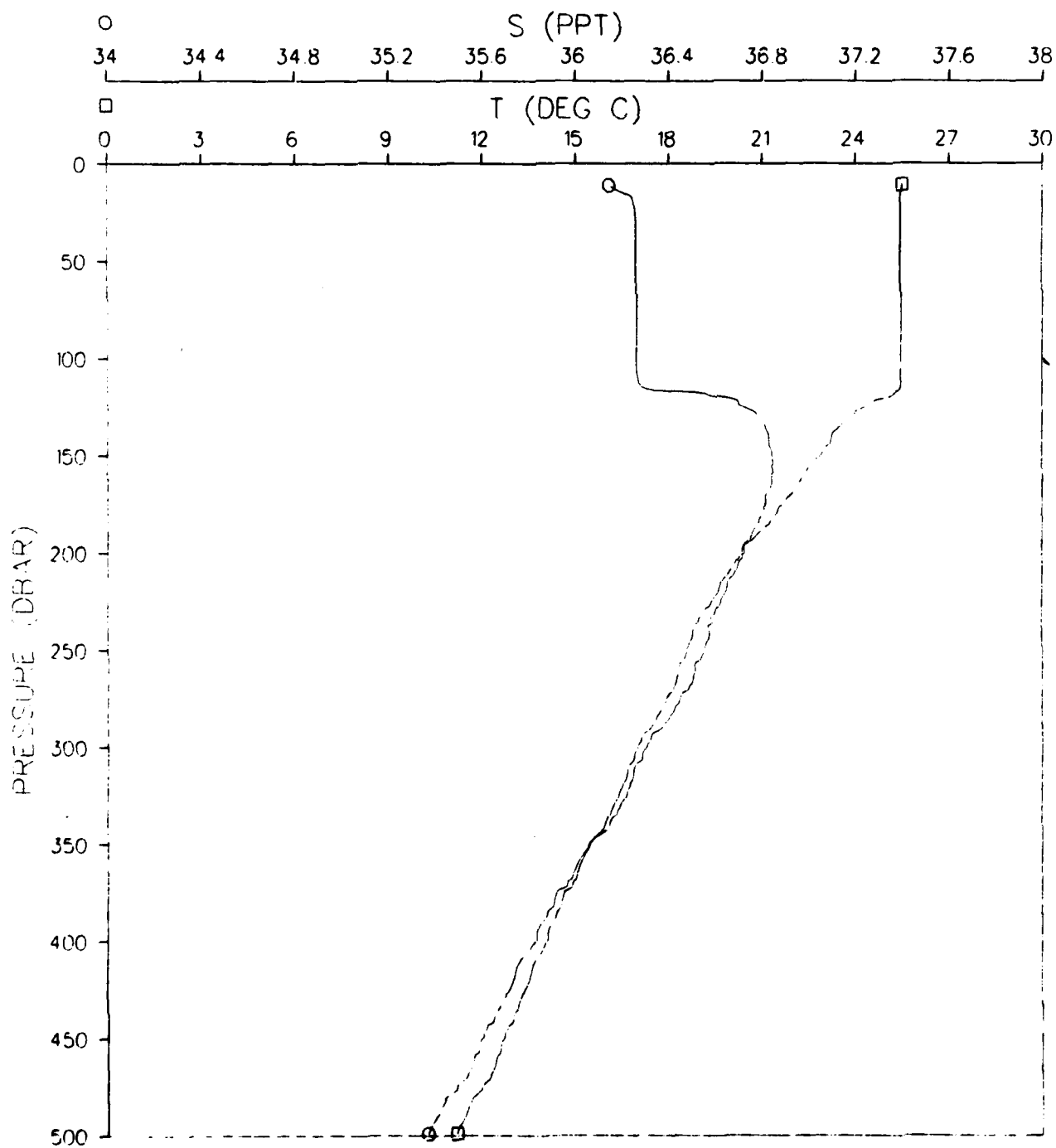


Figure 279.

ATOM 79 DEPLOYMENT
STATION 100007

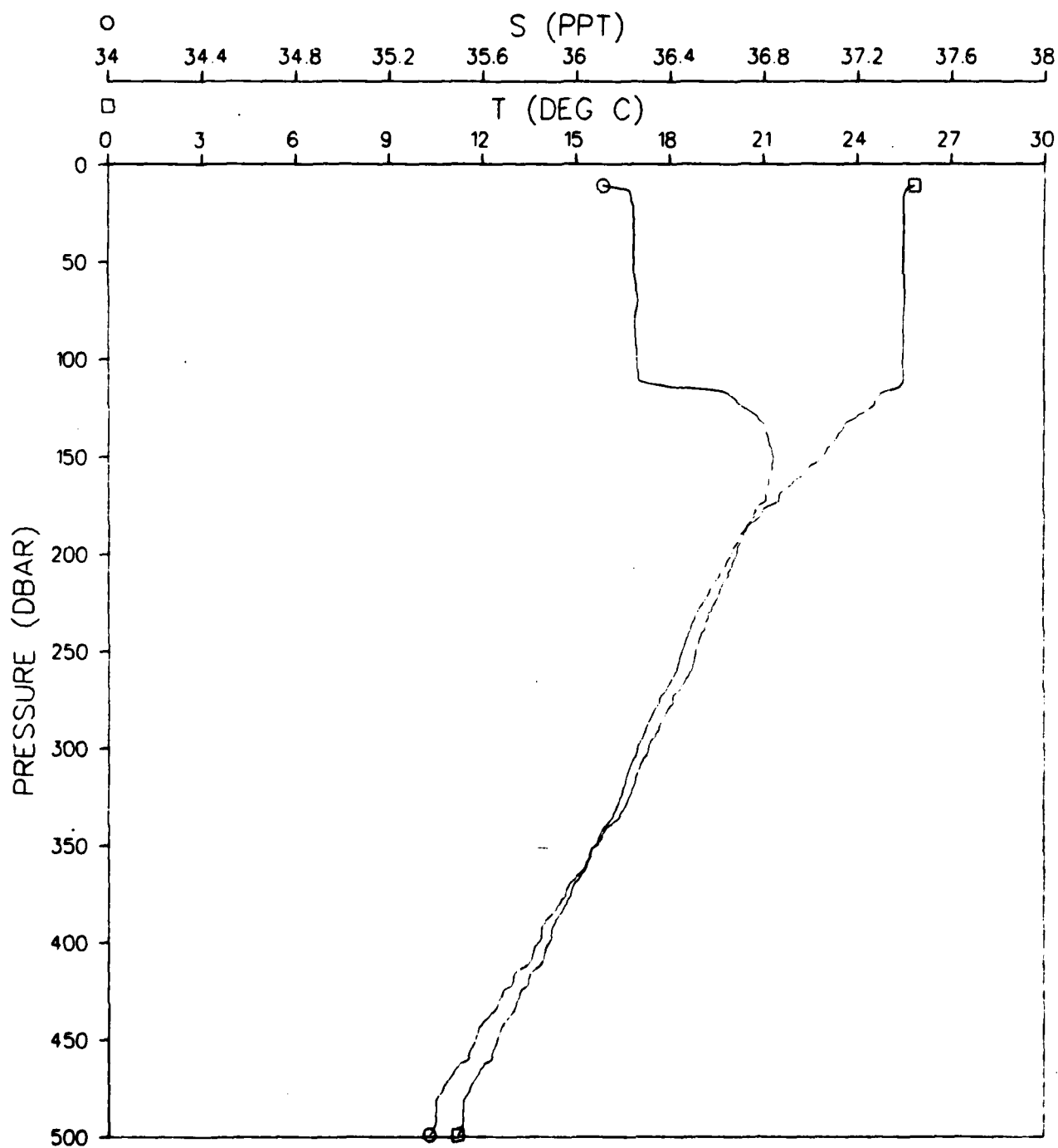


Figure 280.

ATOM 79 DEPLOYMENT
STATION 100008

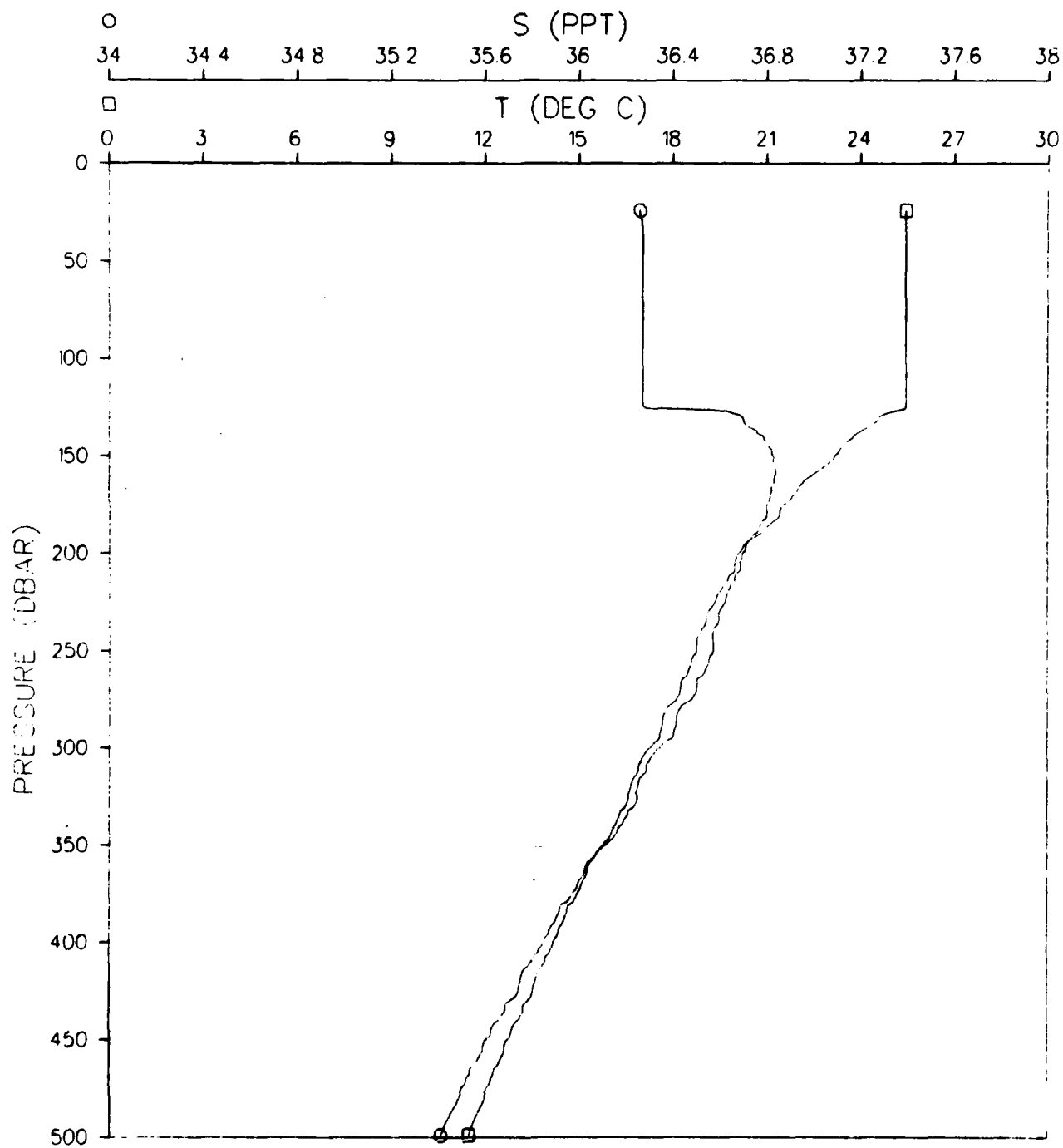


Figure 281.

ATOM 79 DEPLOYMENT
STATION 100009

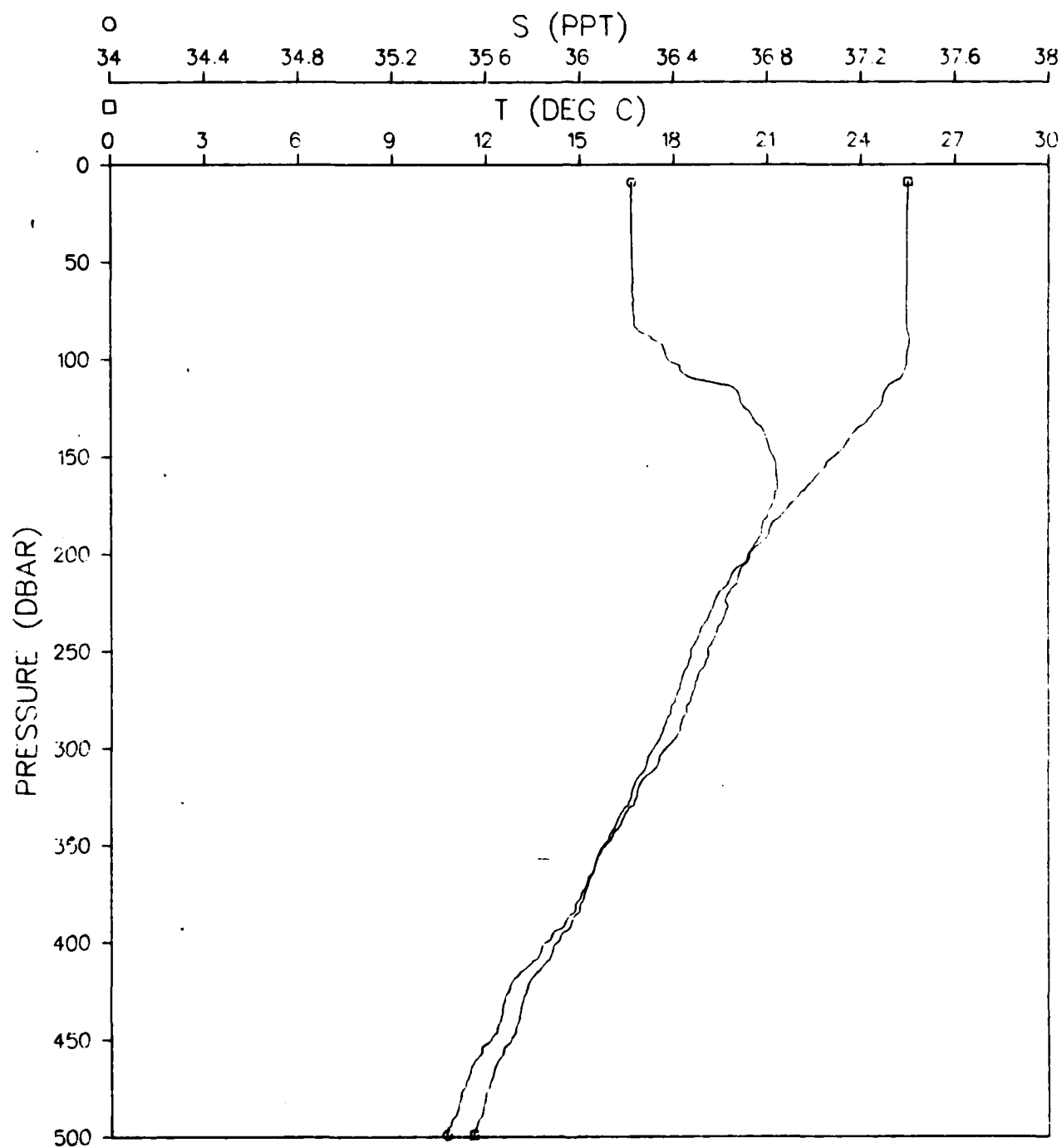


Figure 282.

ATOM 79 DEPLOYMENT
STATION 100010

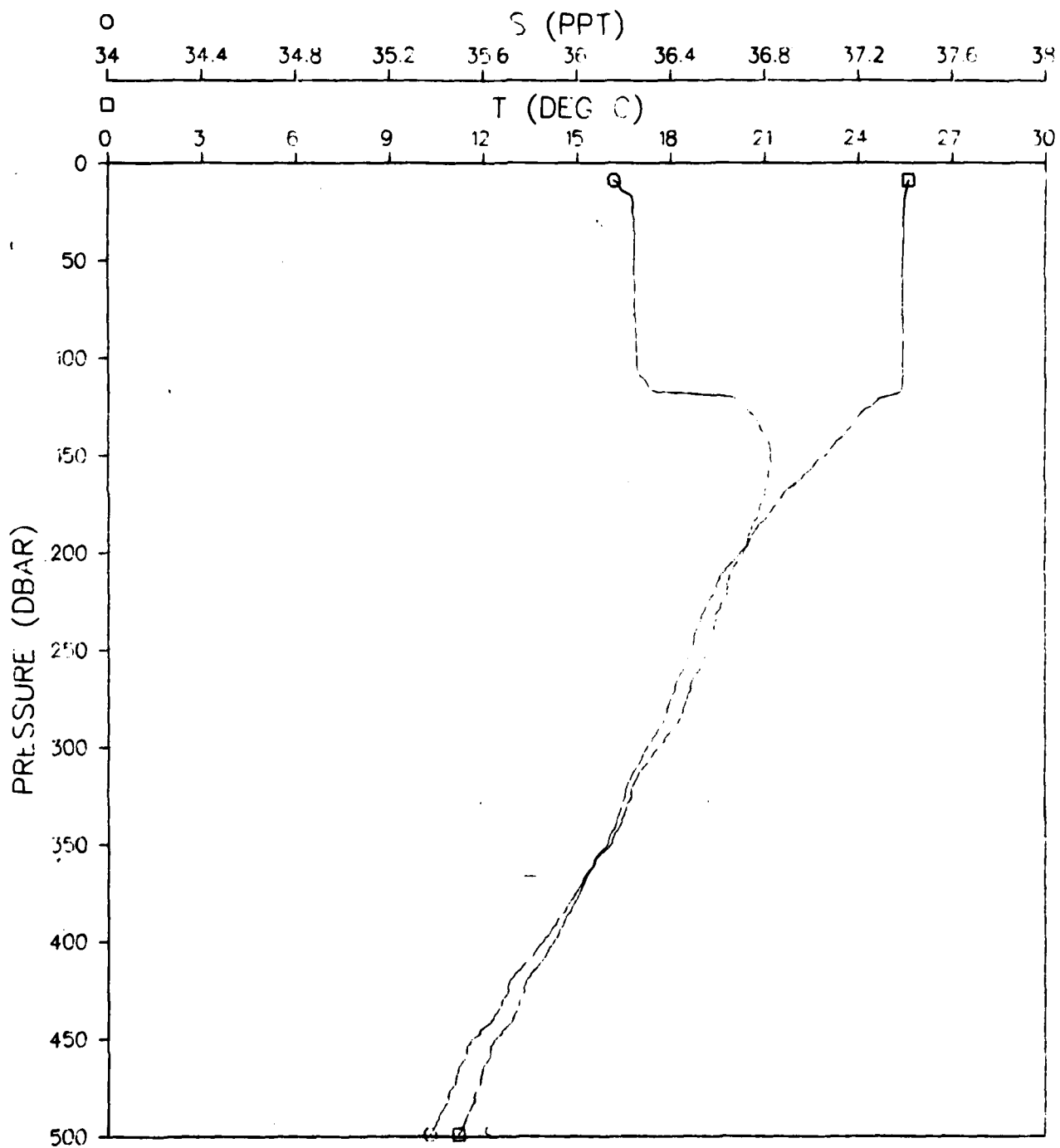


Figure 283.

ATOM 79 DEPLOYMENT STATION 100011

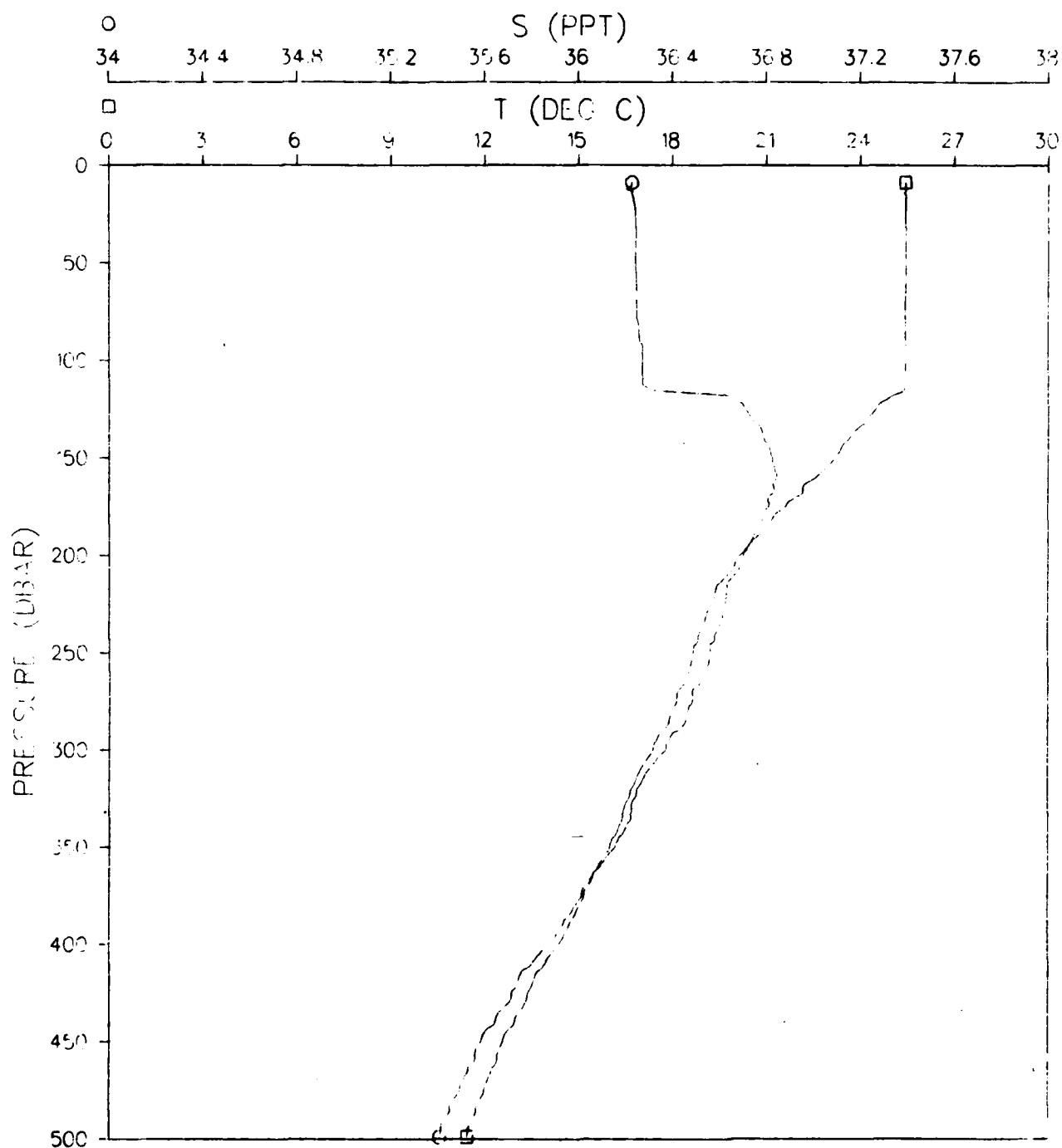


Figure 284.

ATOM 79 DEPLOYMENT
STATION 100012

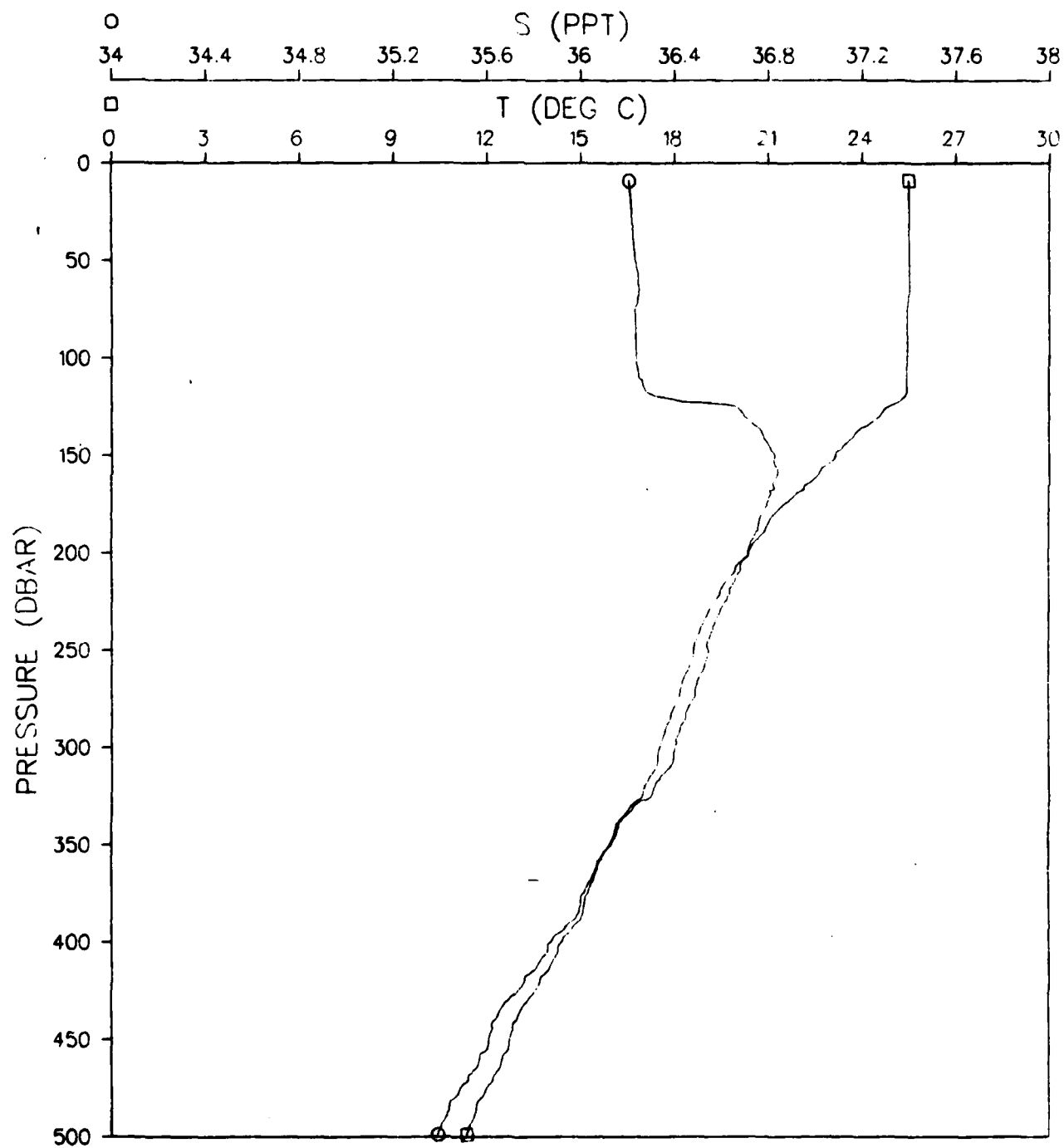


Figure 285.

ATOM 79 DEPLOYMENT STATION 100013

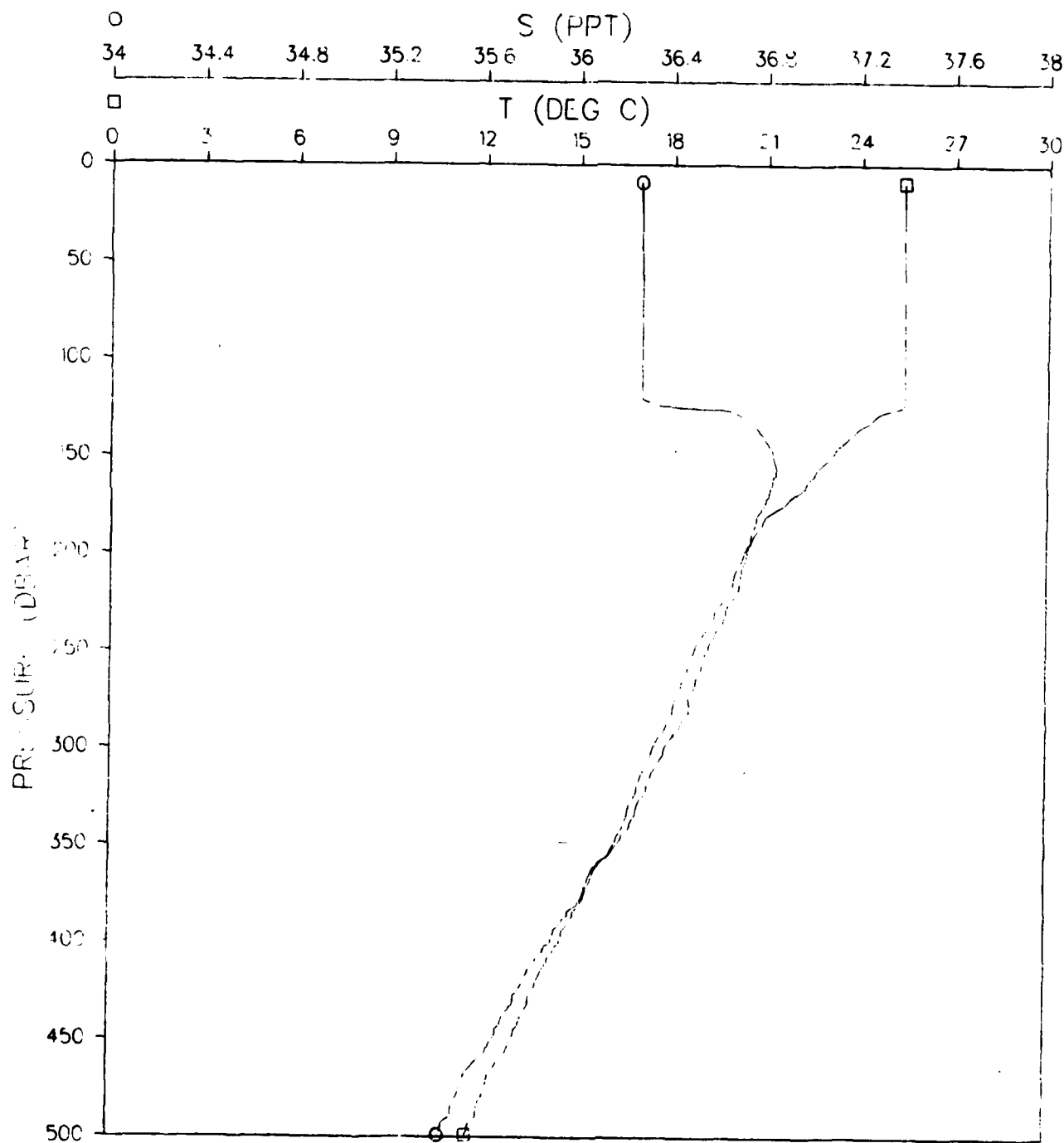


Figure 286.

ATOM 79 DEPLOYMENT
STATION 100014

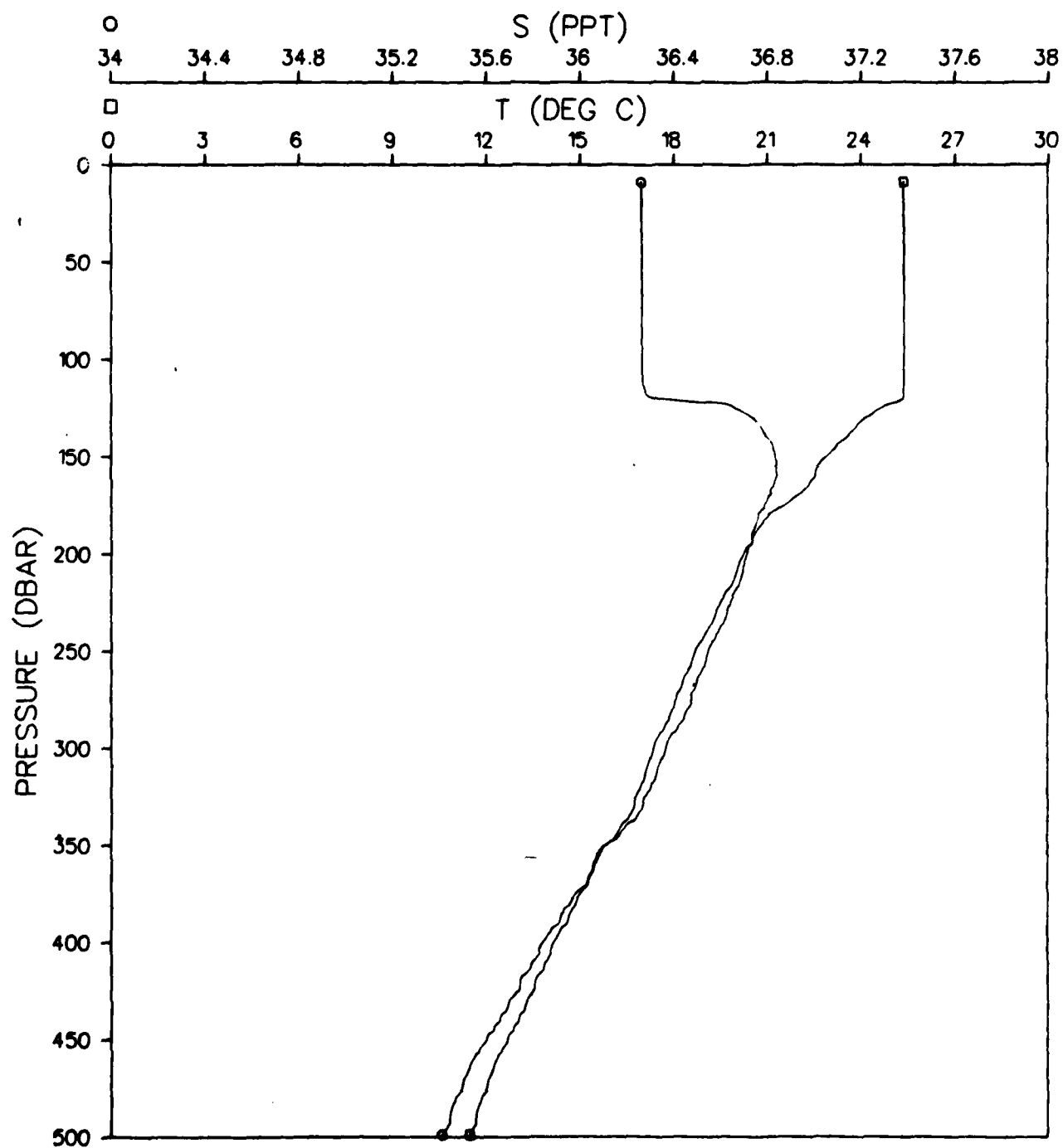


Figure 287.

ATOM 79 DEPLOYMENT
STATION 100015

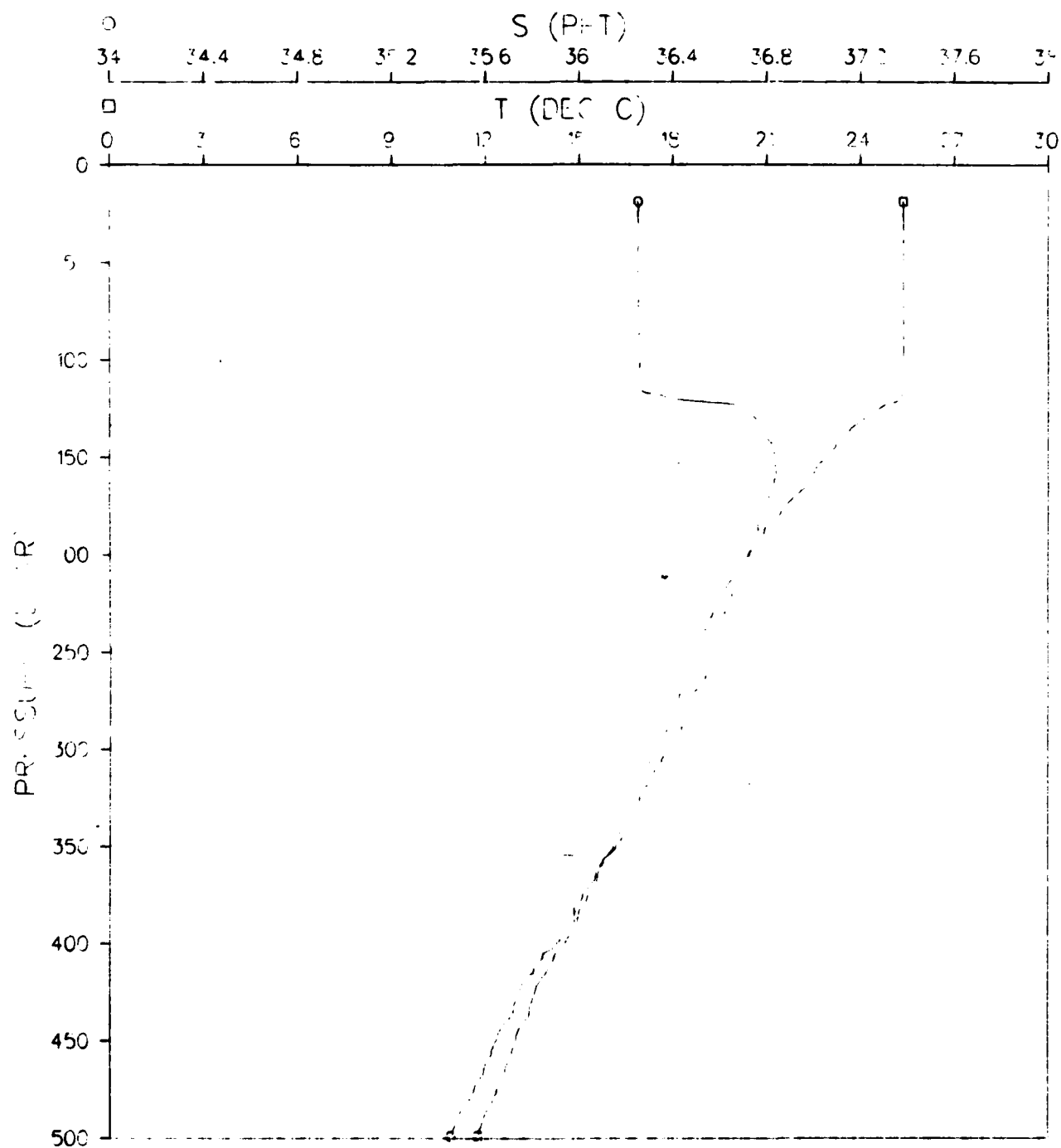


Figure 288.

ATOM 79 DEPLOYMENT
STATION 100016

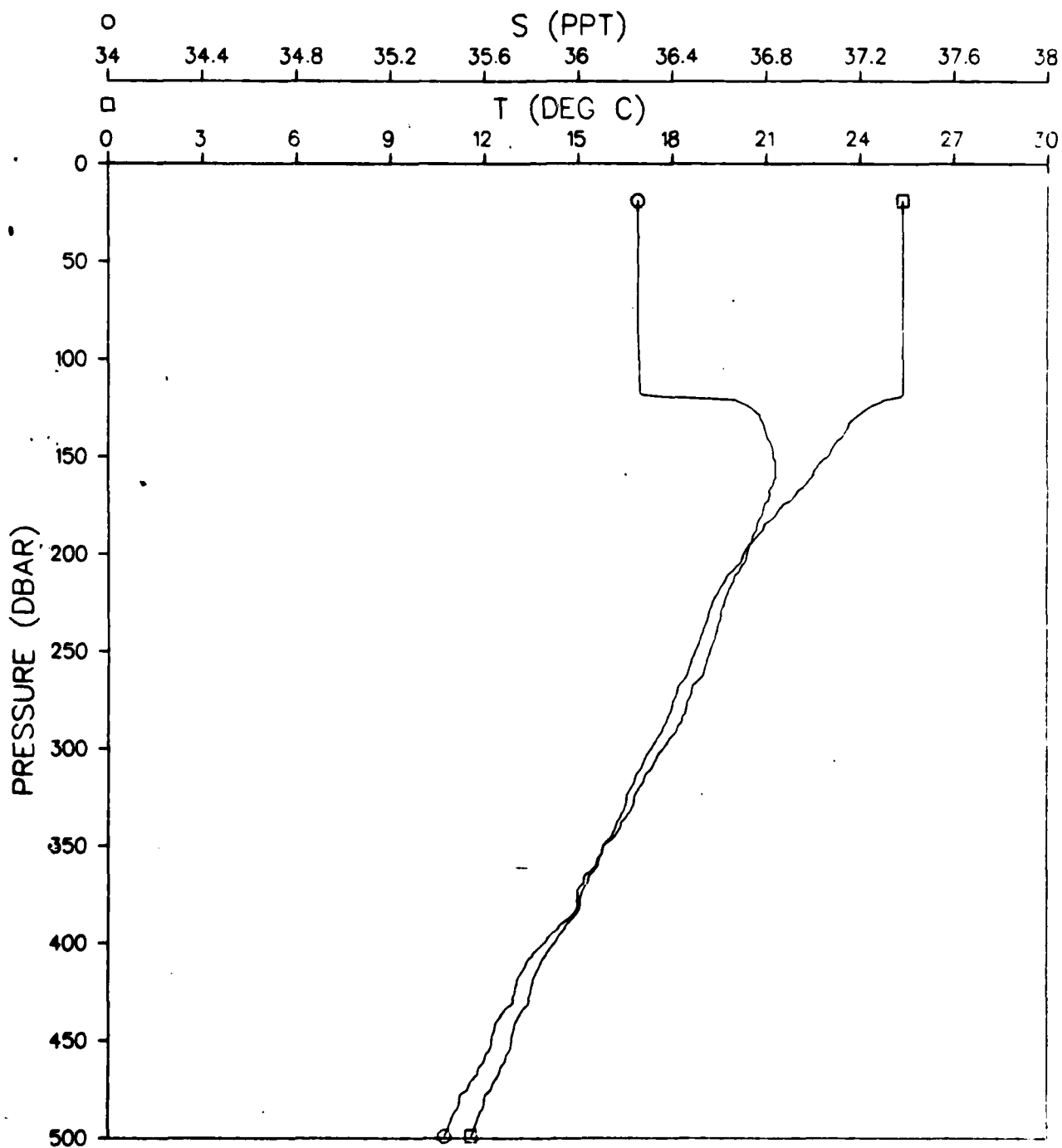


Figure 289.

ATOM 79 DEPLOYMENT
STATION 100017

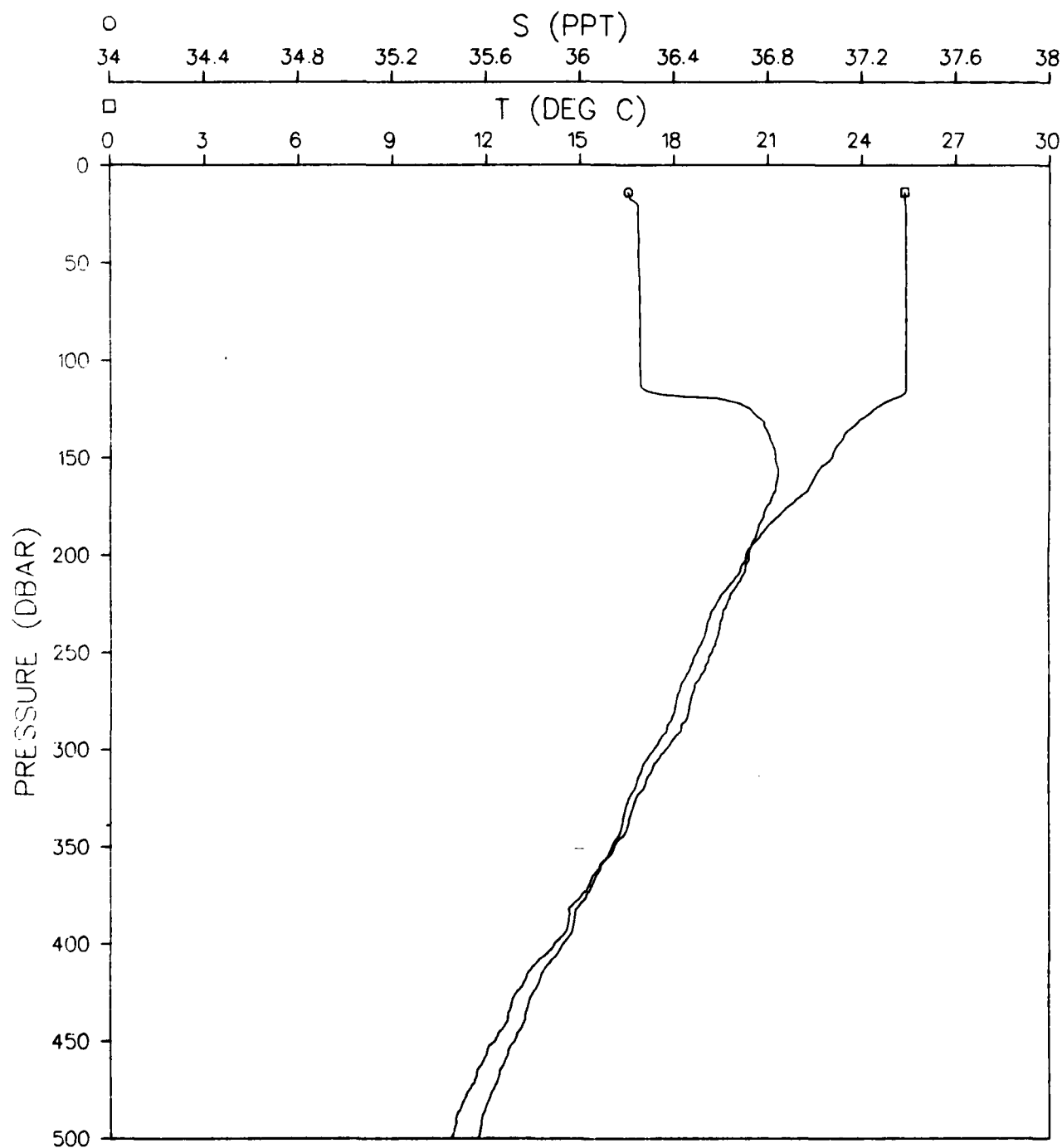


Figure 290.

ATOM 79 DEPLOYMENT
STATION 100018

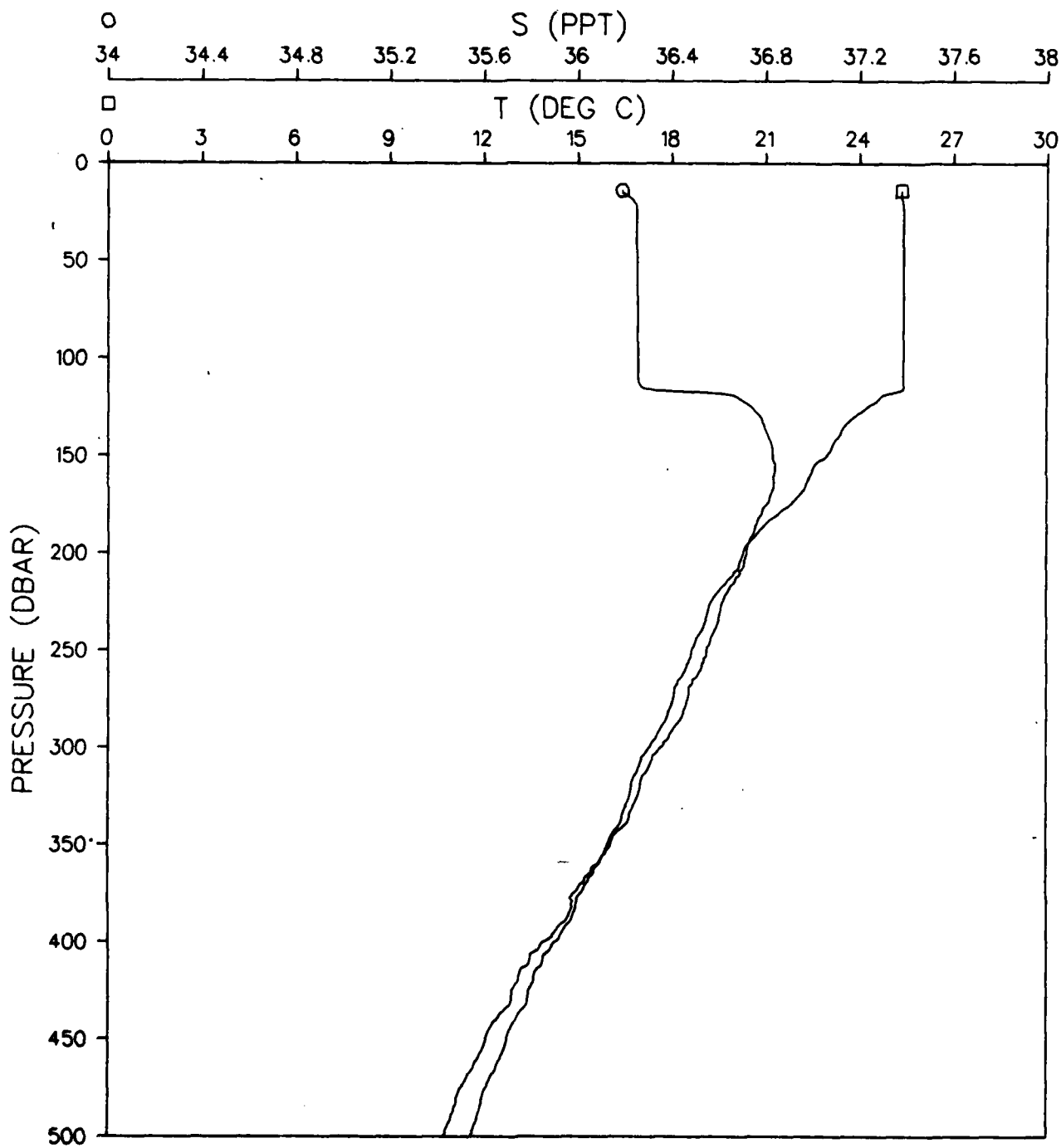


Figure 291.

ATOM 79 DEPLOYMENT
STATION 100019

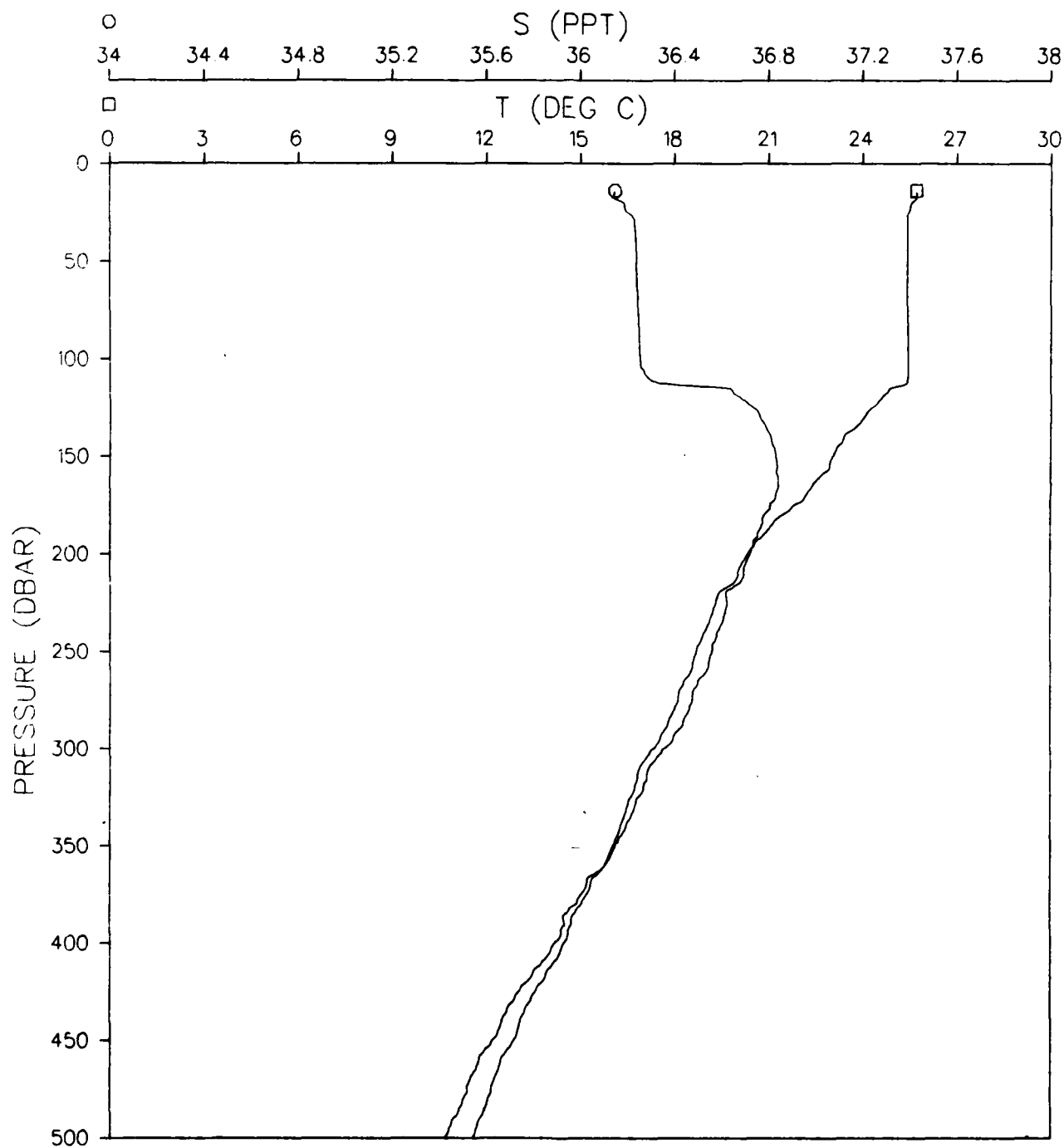


Figure 292.

ATOM 79 DEPLOYMENT
STATION 100020

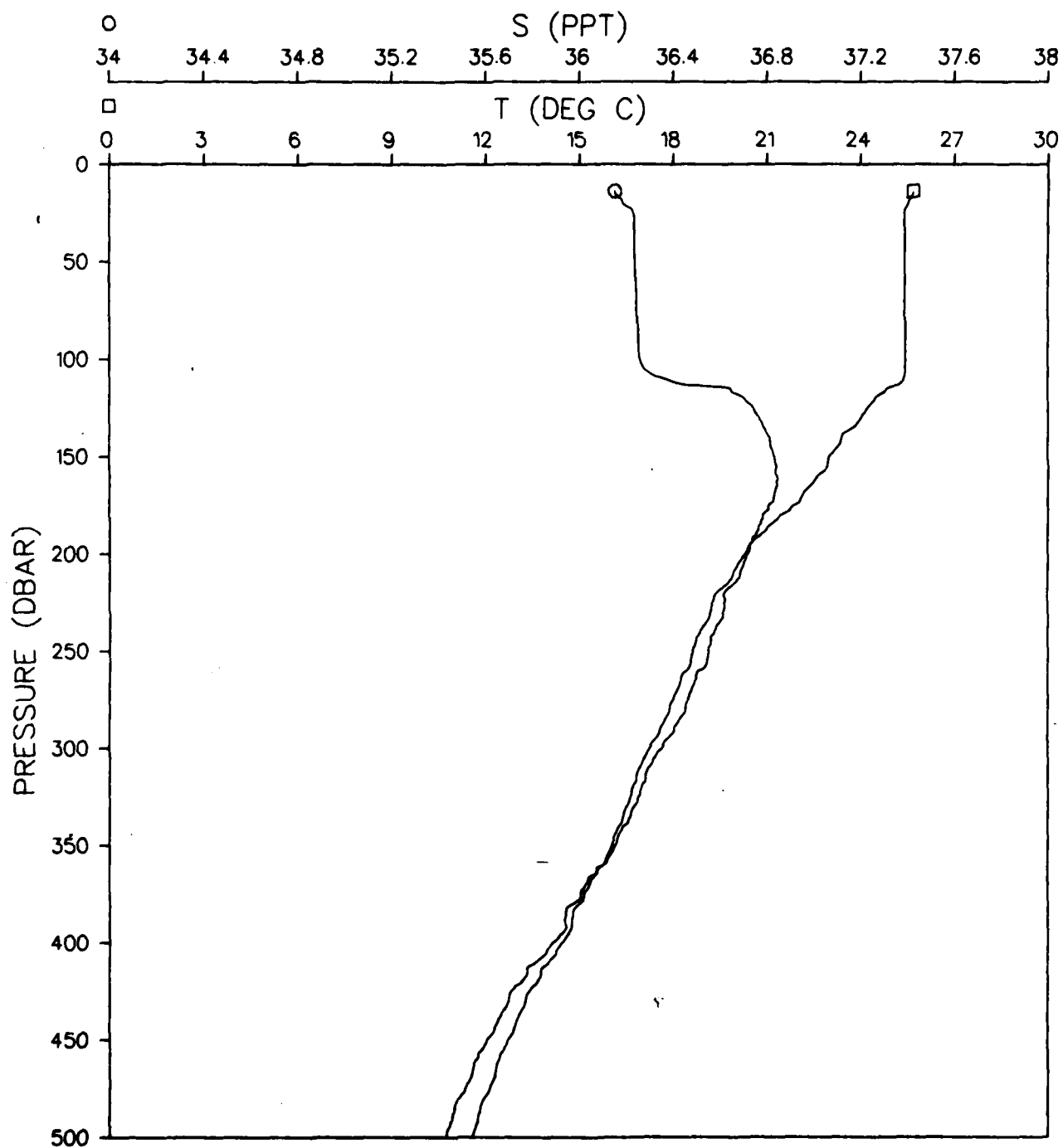


Figure 293.

ATOM 79 DEPLOYMENT
STATION 100021

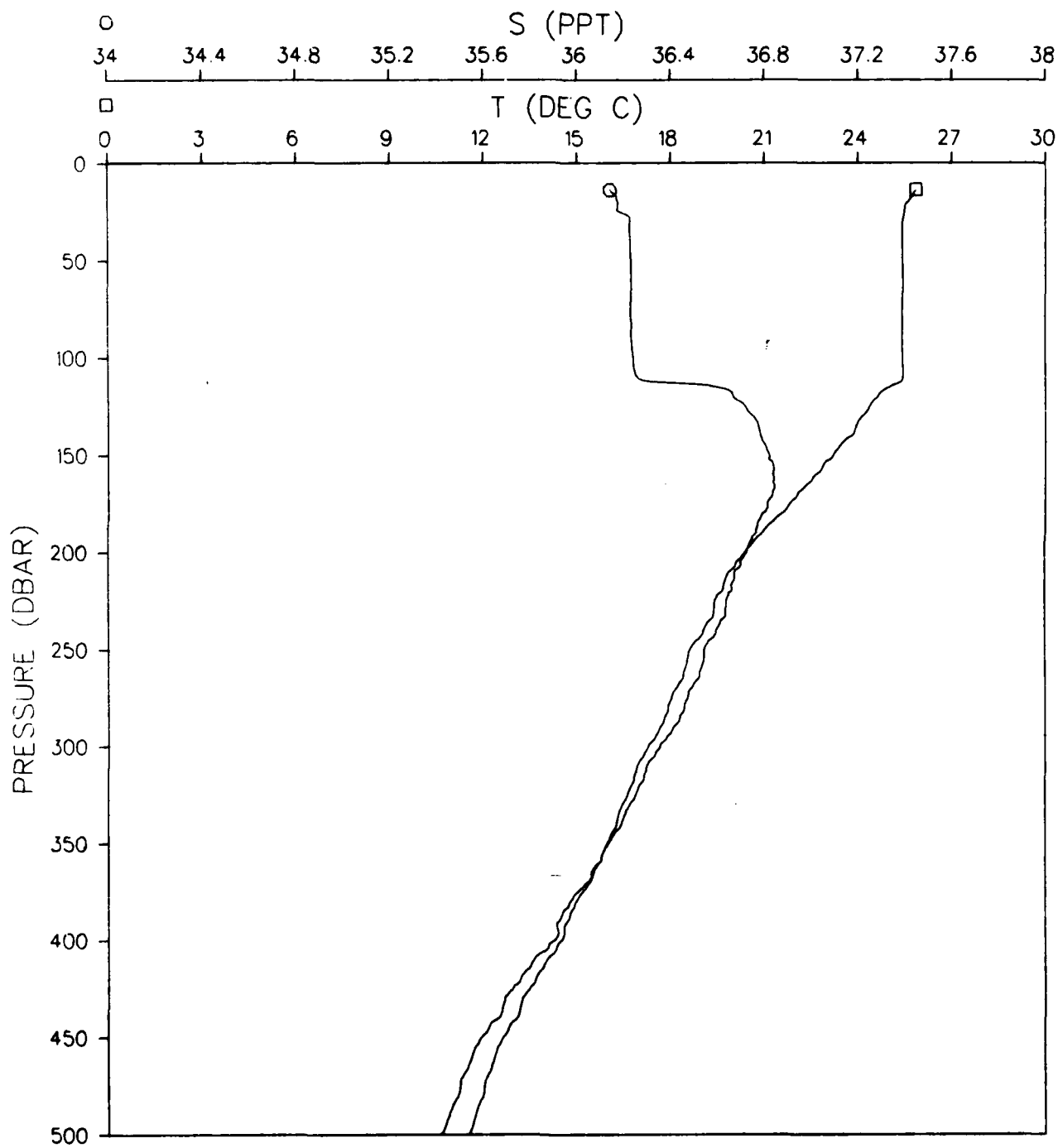


Figure 294.

ATOM 79 DEPLOYMENT
STATION 100022

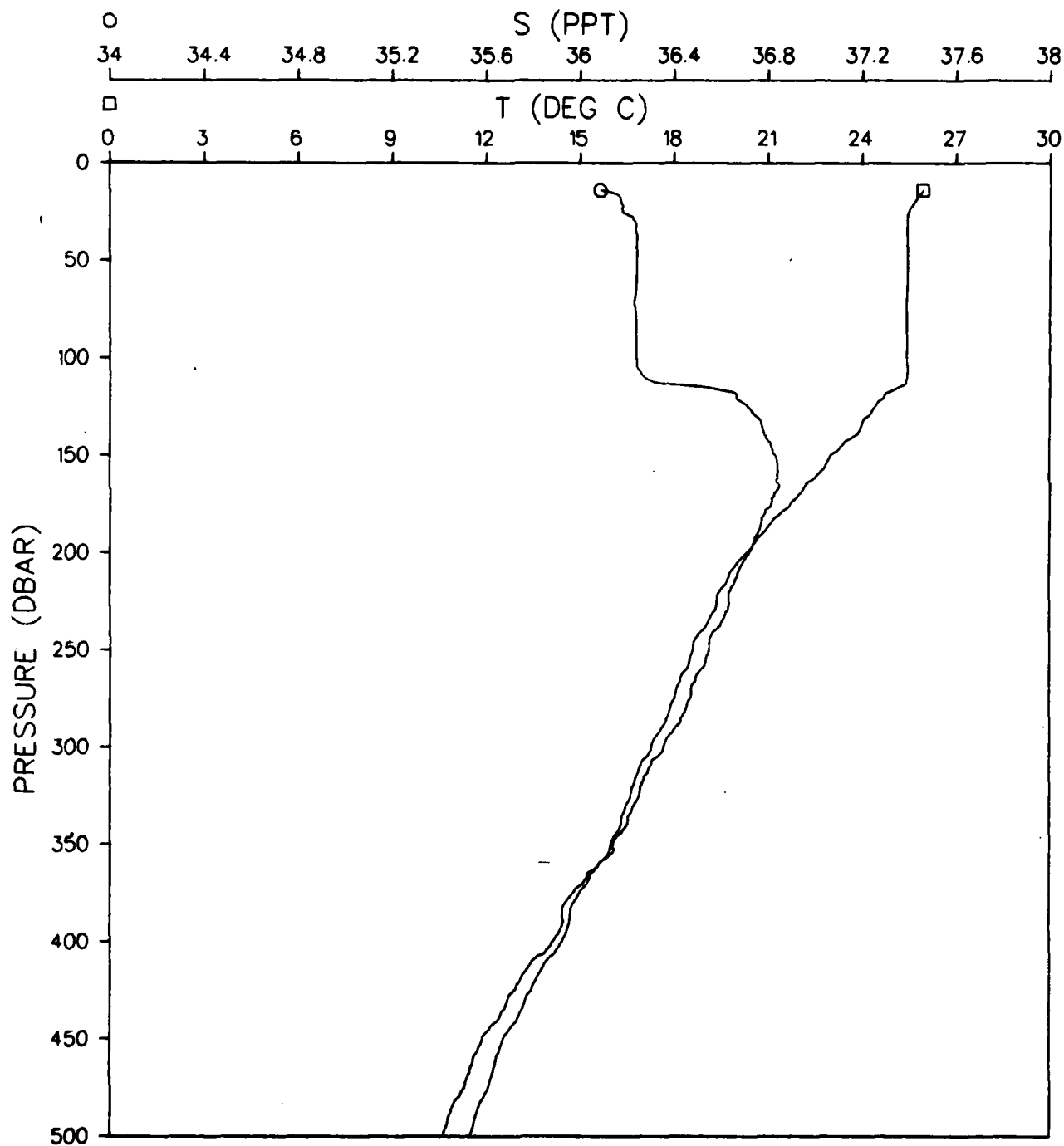


Figure 295.

ATOM 79 DEPLOYMENT
STATION 100023

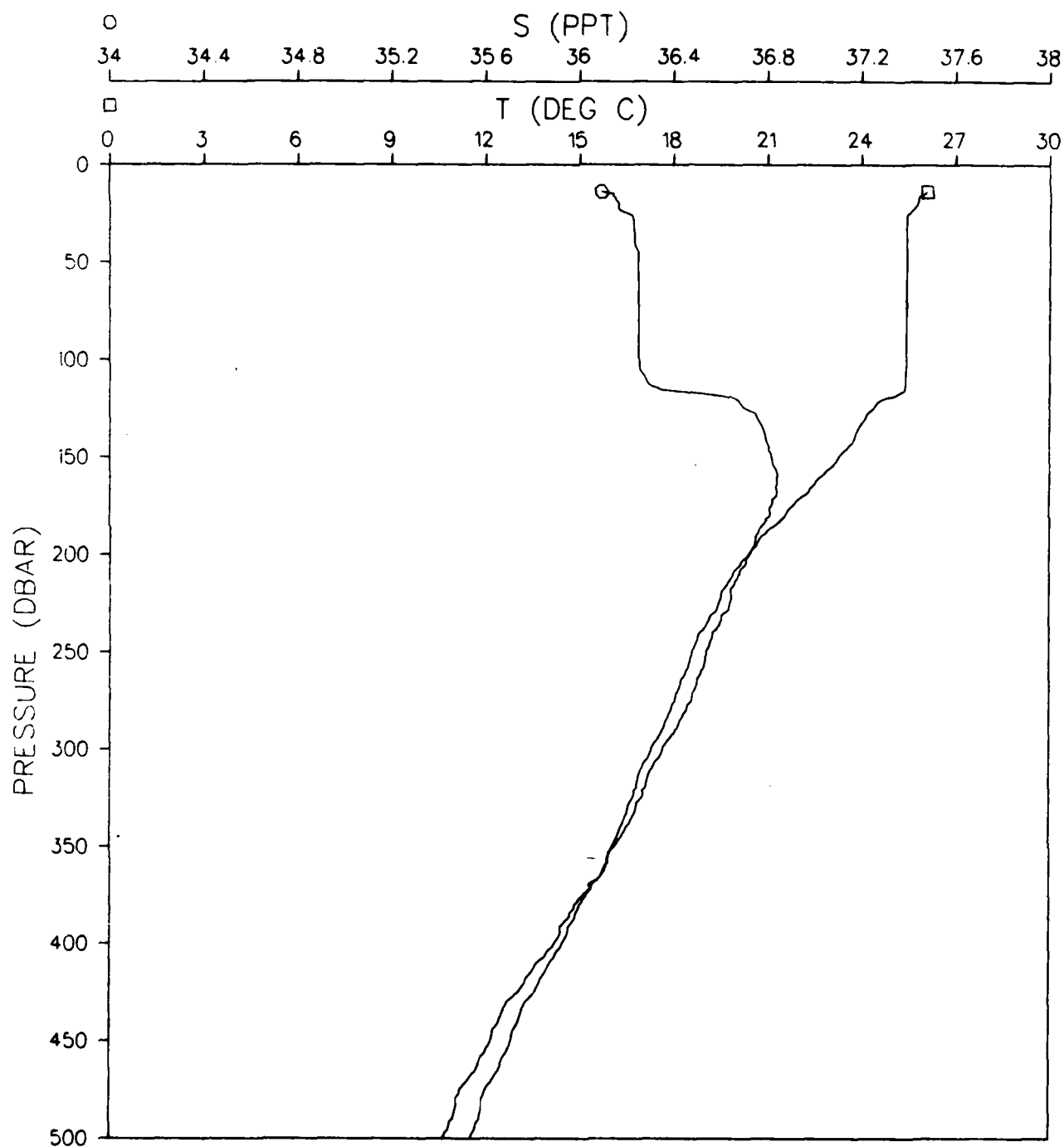


Figure 296.

ATOM 79 DEPLOYMENT
STATION 100024

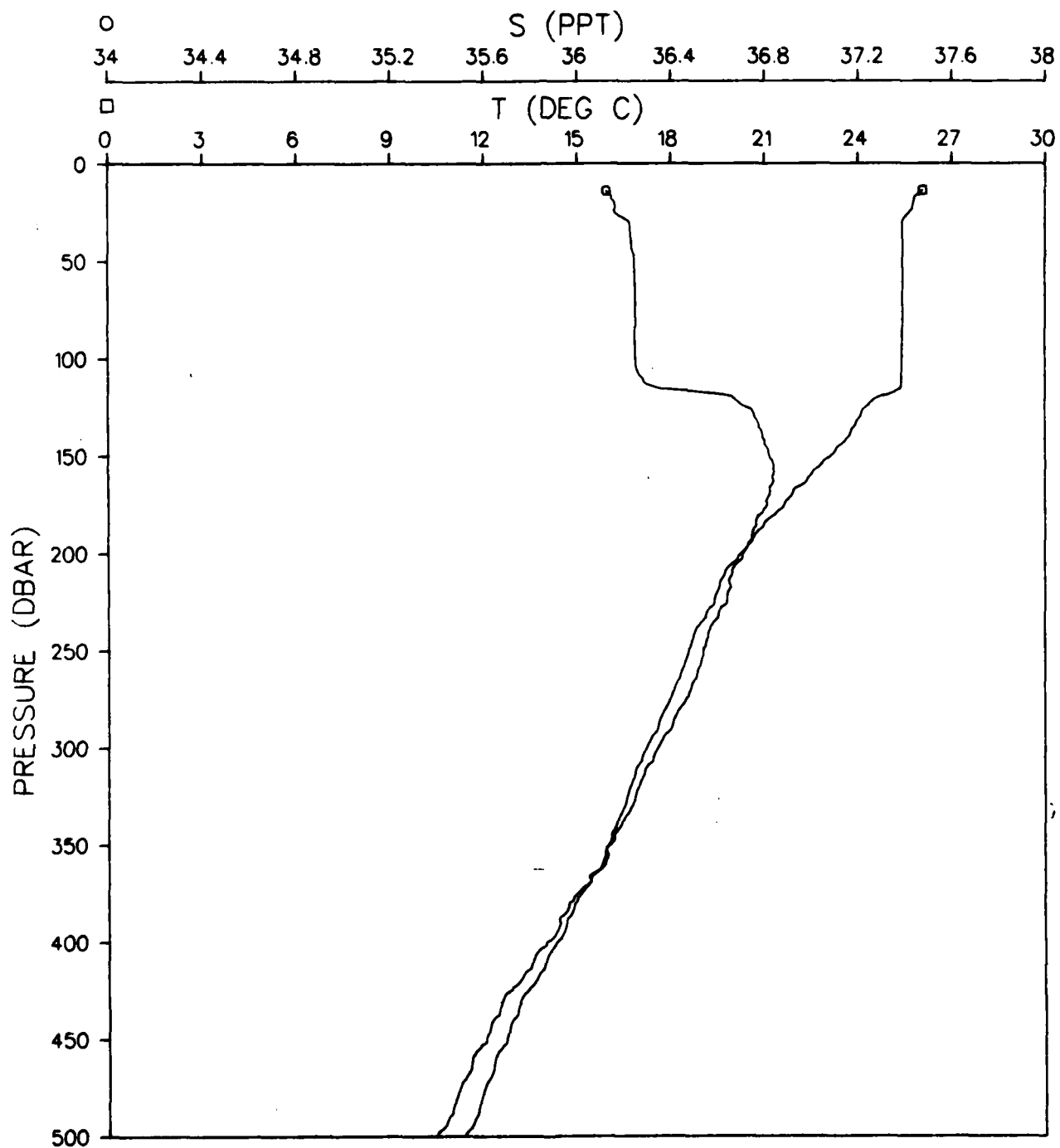


Figure 297.

ATOM 79 DEPLOYMENT STATION 100025

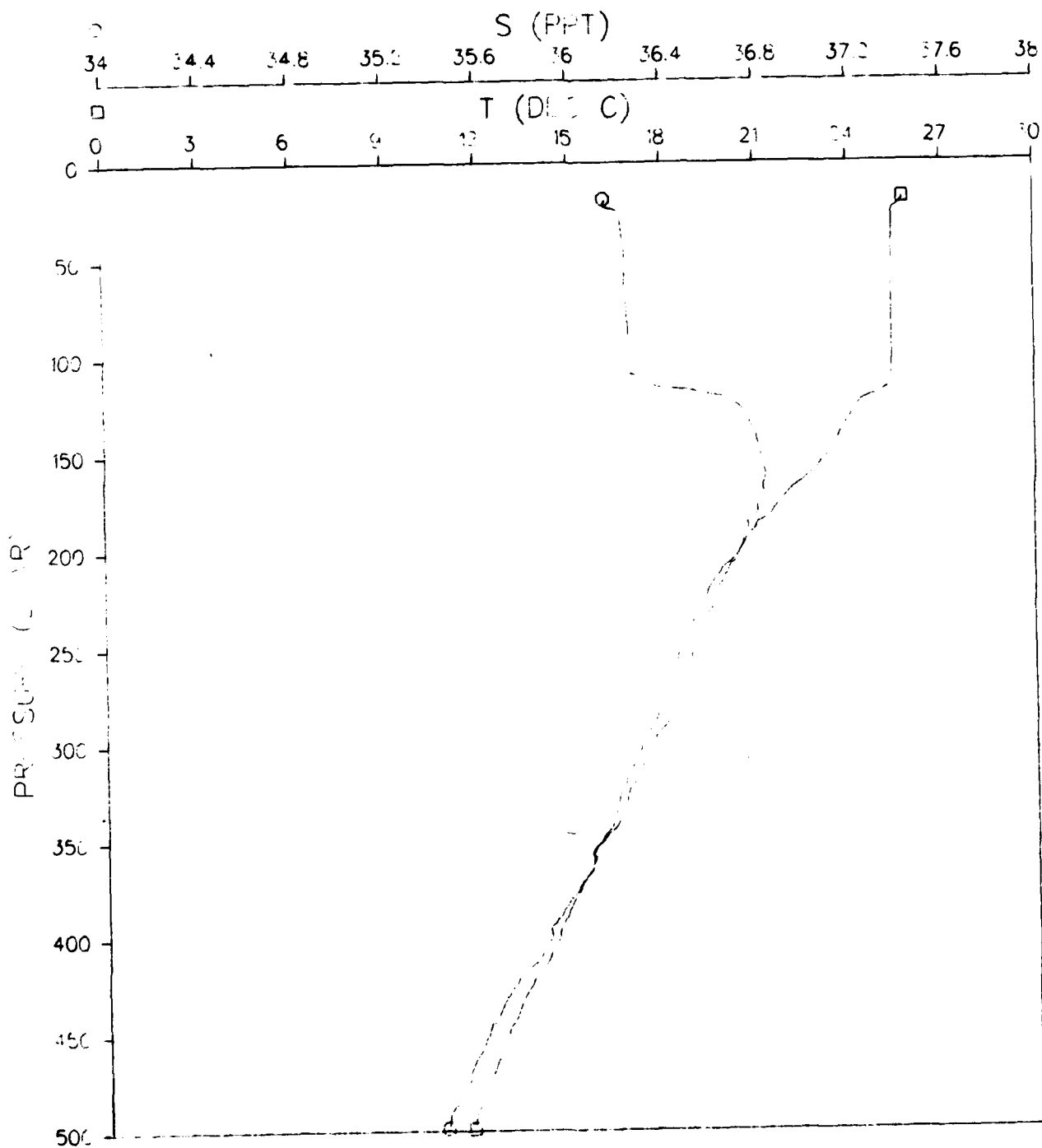


Figure 298.

ATOM 79 DEPLOYMENT
STATION 100026

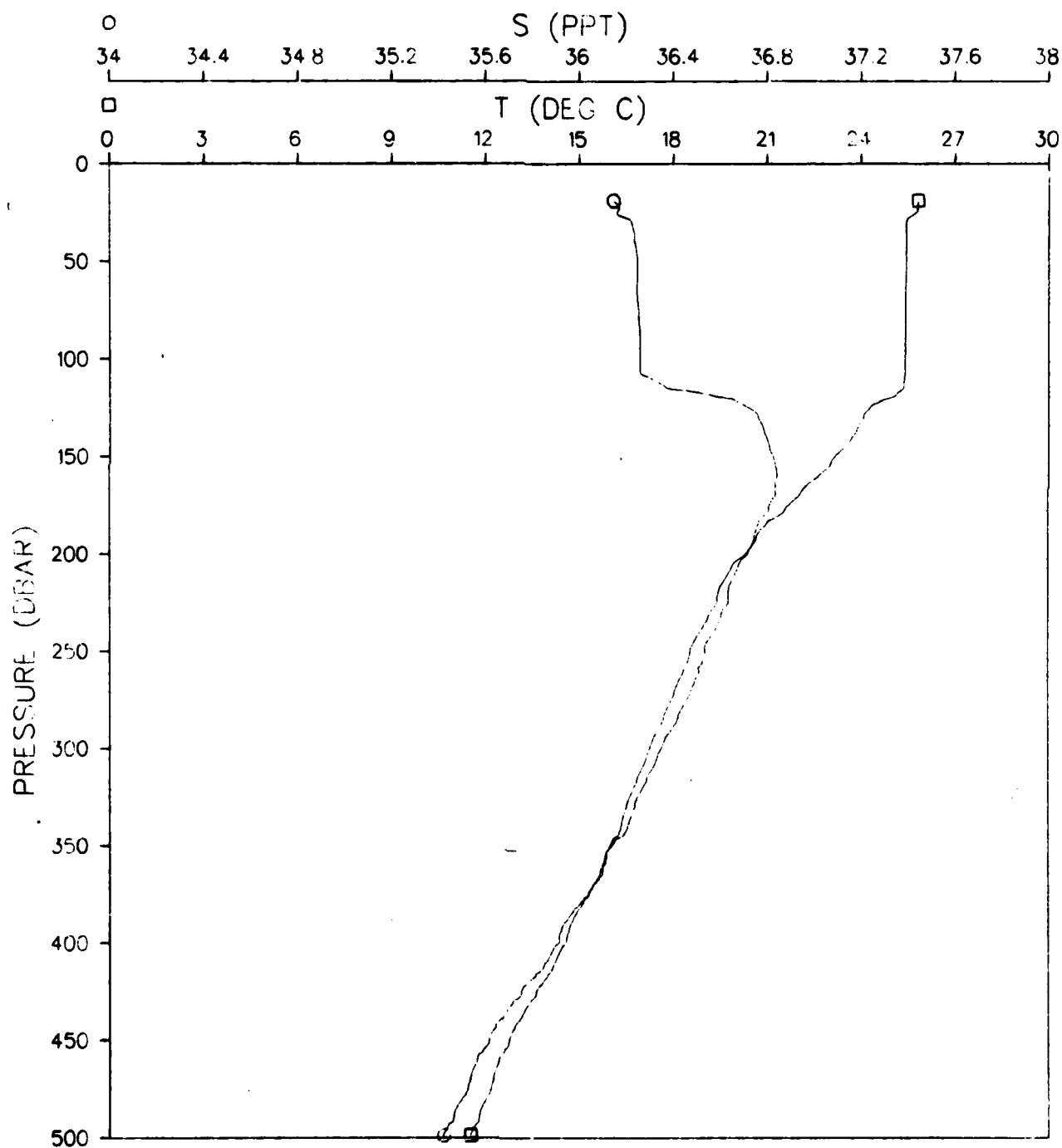


Figure 299.

ATOM 79 DEPLOYMENT STATION 100027

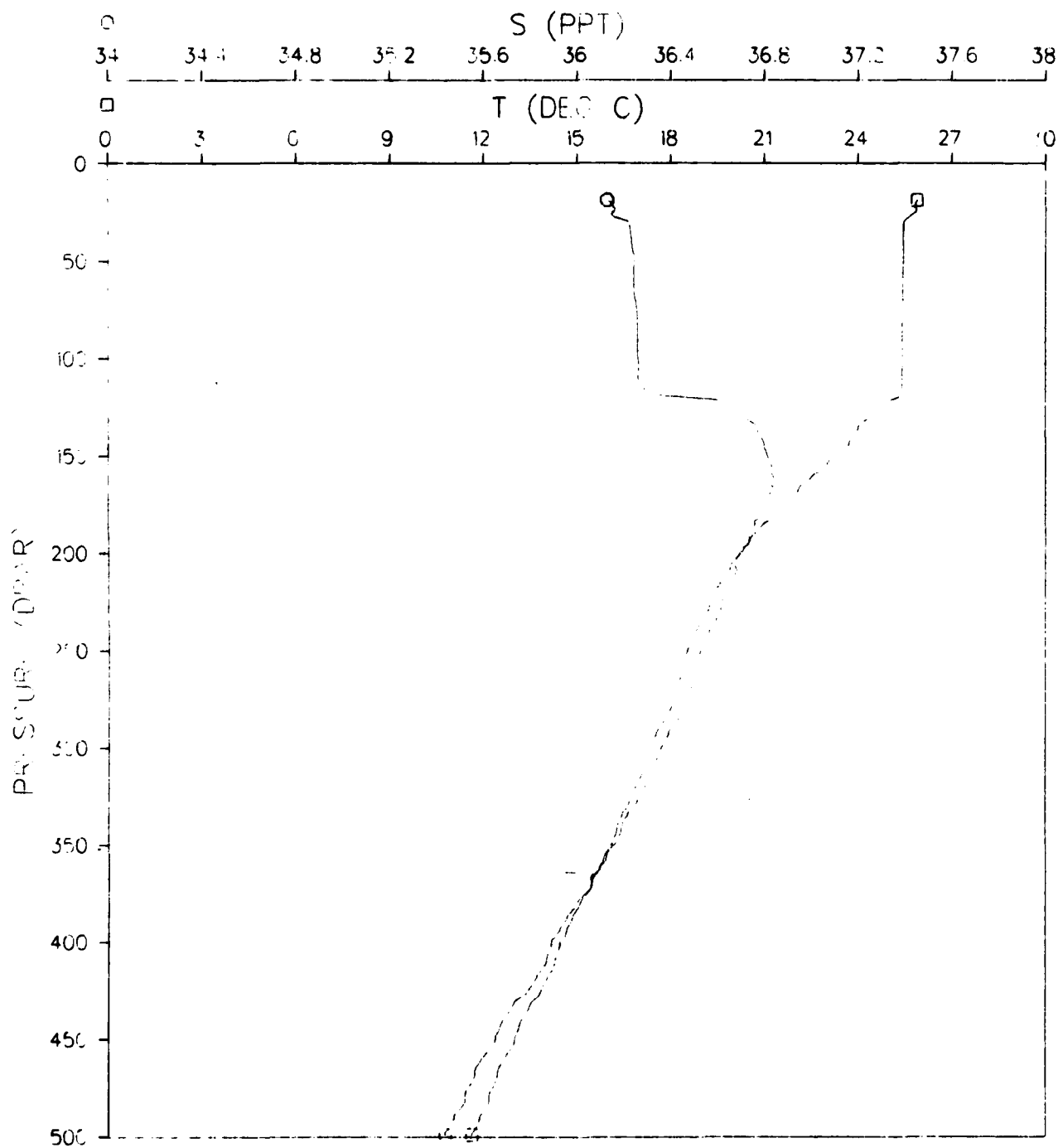


Figure 300.

ATOM 79 DEPLOYMENT
STATION 100028

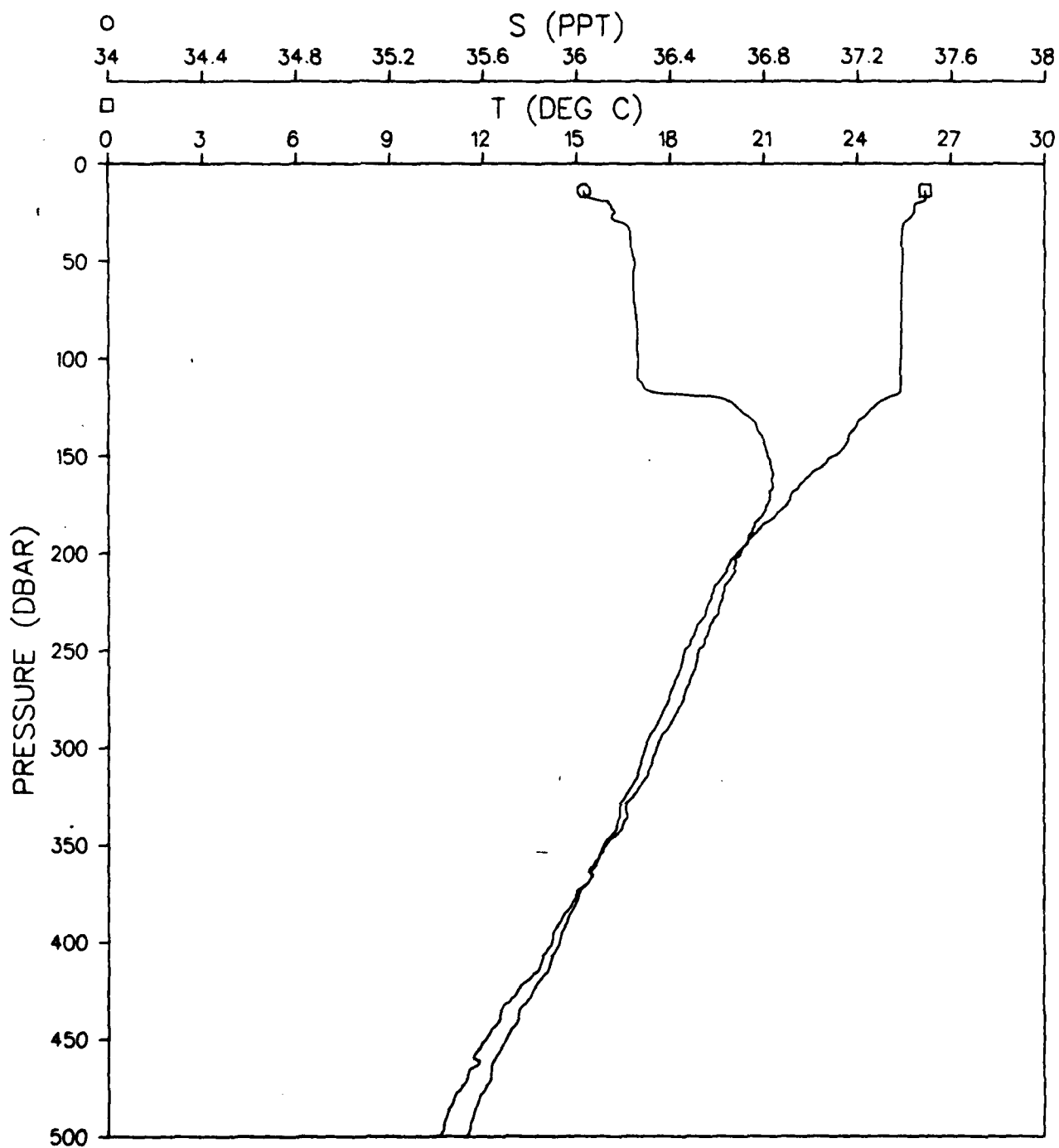


Figure 301.

ATOM 79 DEPLOYMENT
STATION 100029

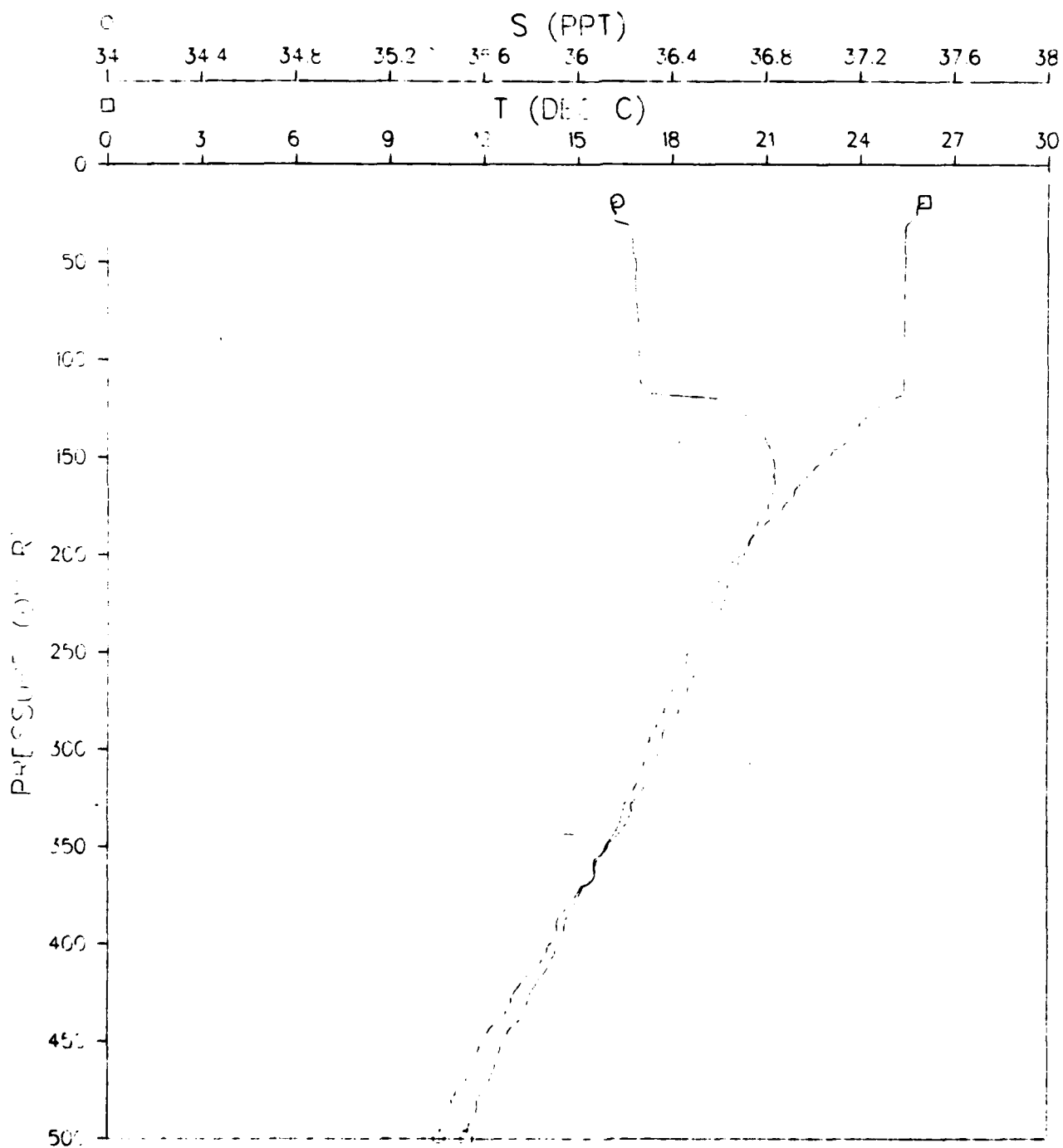


Figure 302.

ATOM 79 DEPLOYMENT
STATION 100030

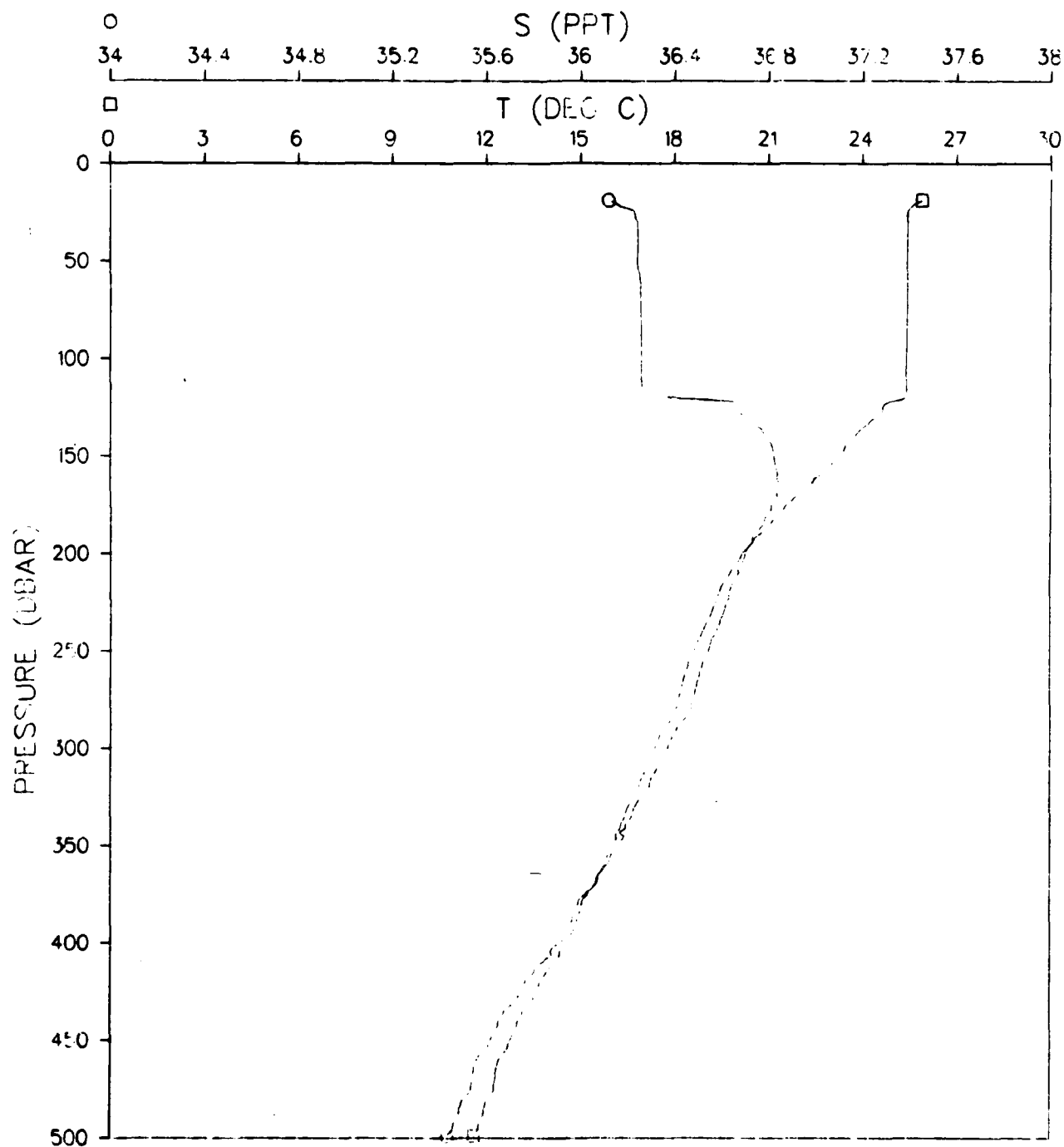


Figure 303.

ATOM 79 DEPLOYMENT STATION 100031

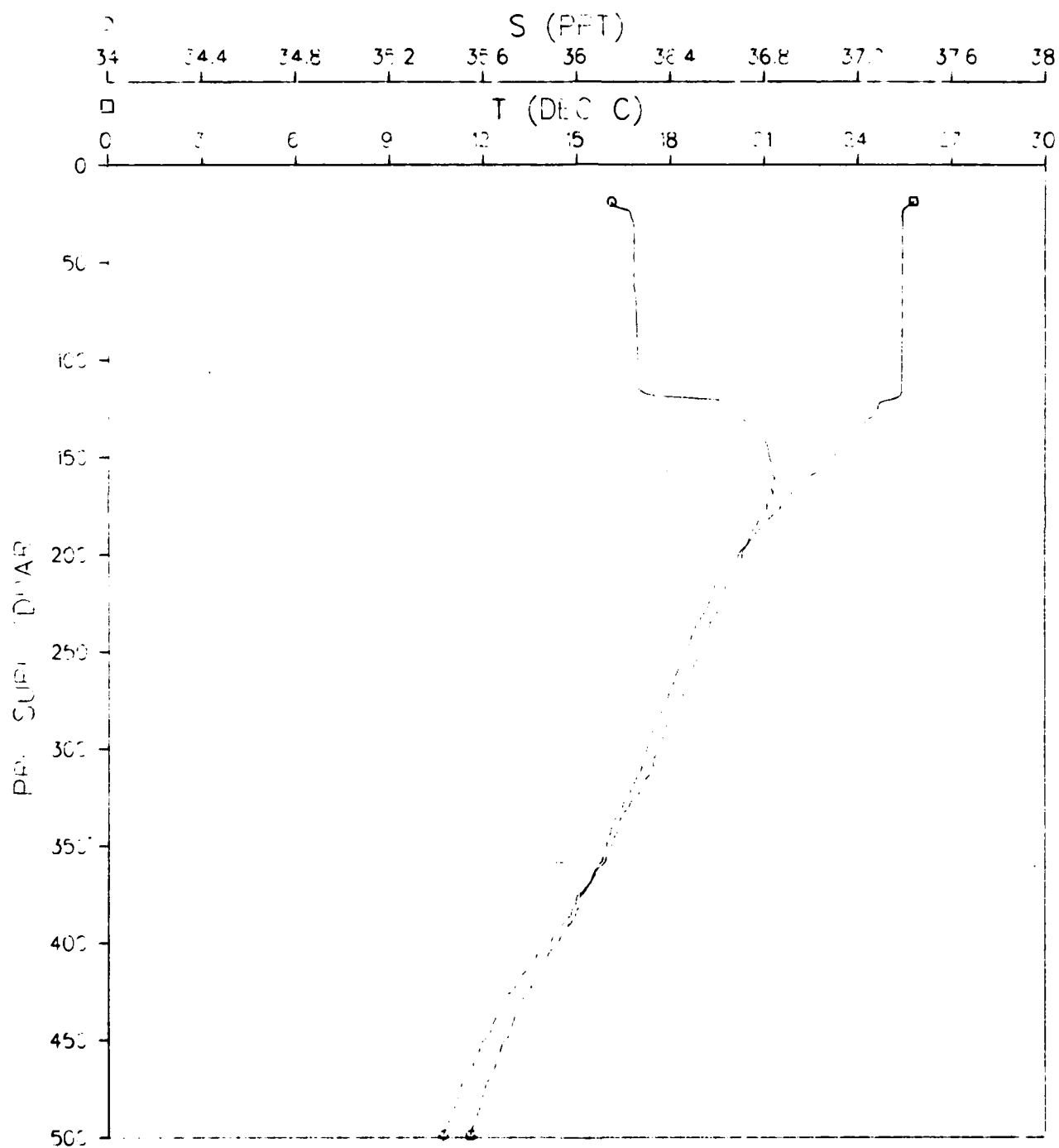


Figure 304.

ATOM 79 DEPLOYMENT
STATION 100032

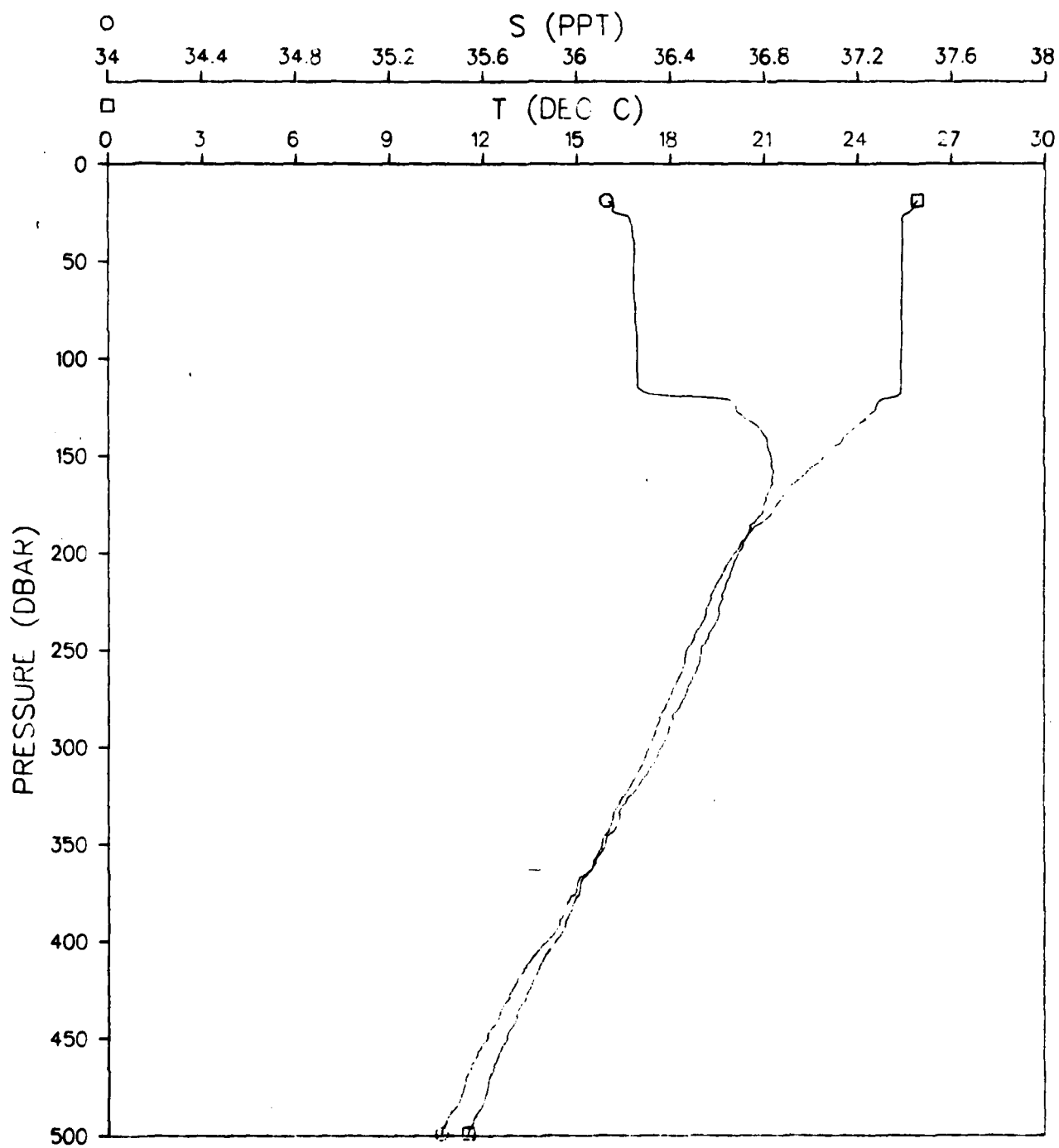


Figure 305.

ATOM 79 DEPLOYMENT STATION 1000-3

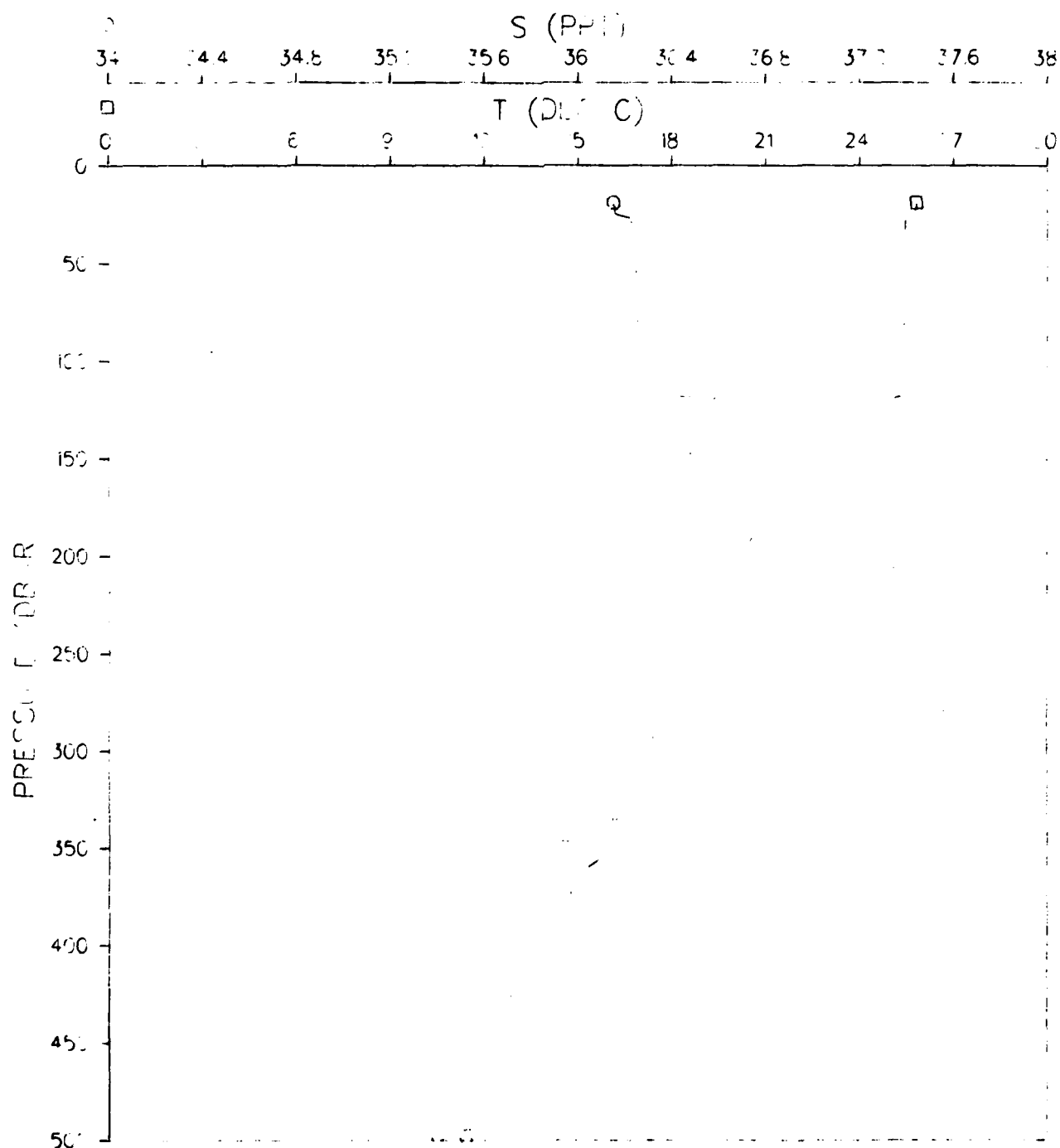


Figure 306.

ATOM 79 DEPLOYMENT
STATION 100034

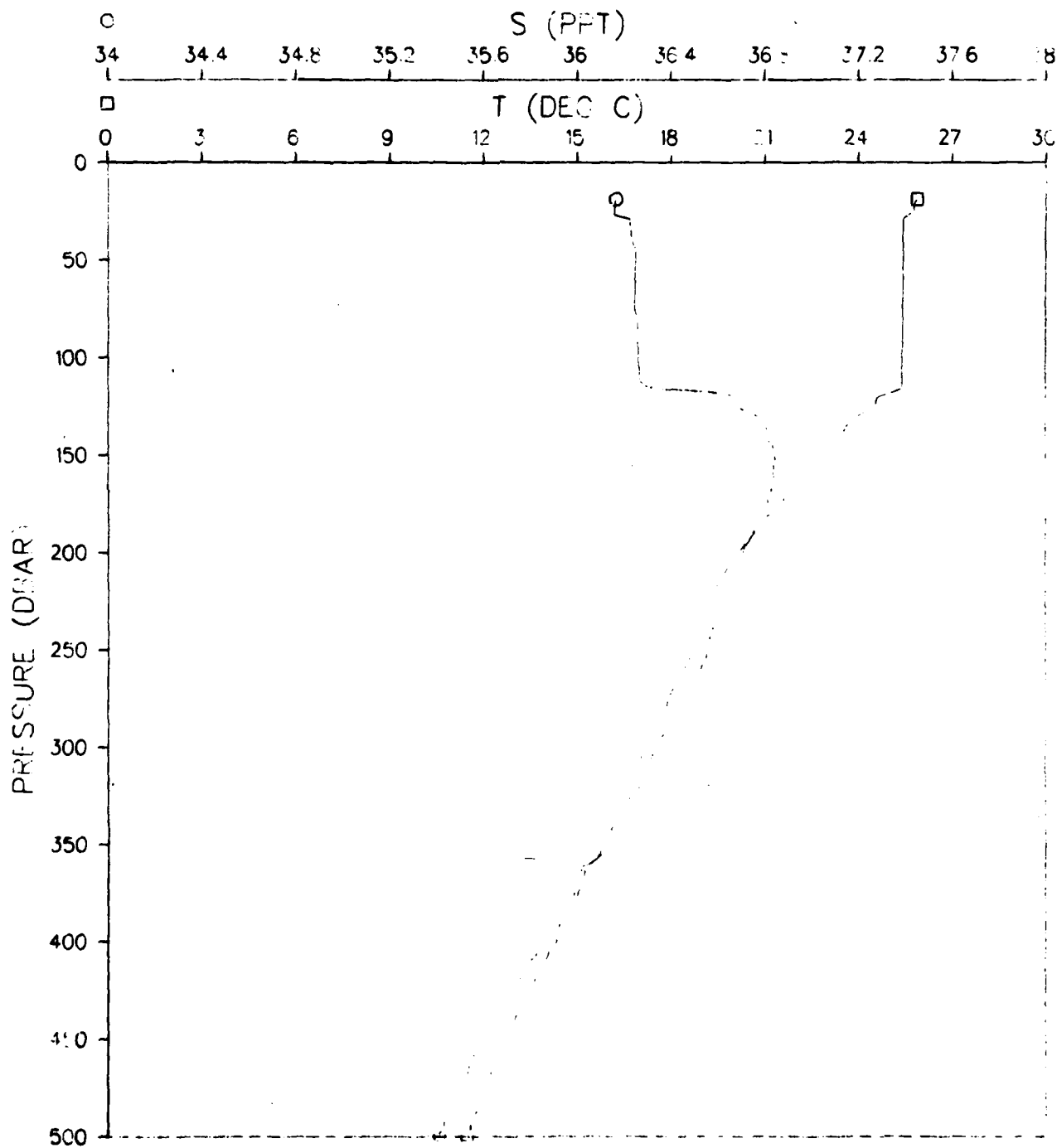


Figure 307.

ATOM 79 DEPLOYMENT
STATION 100001

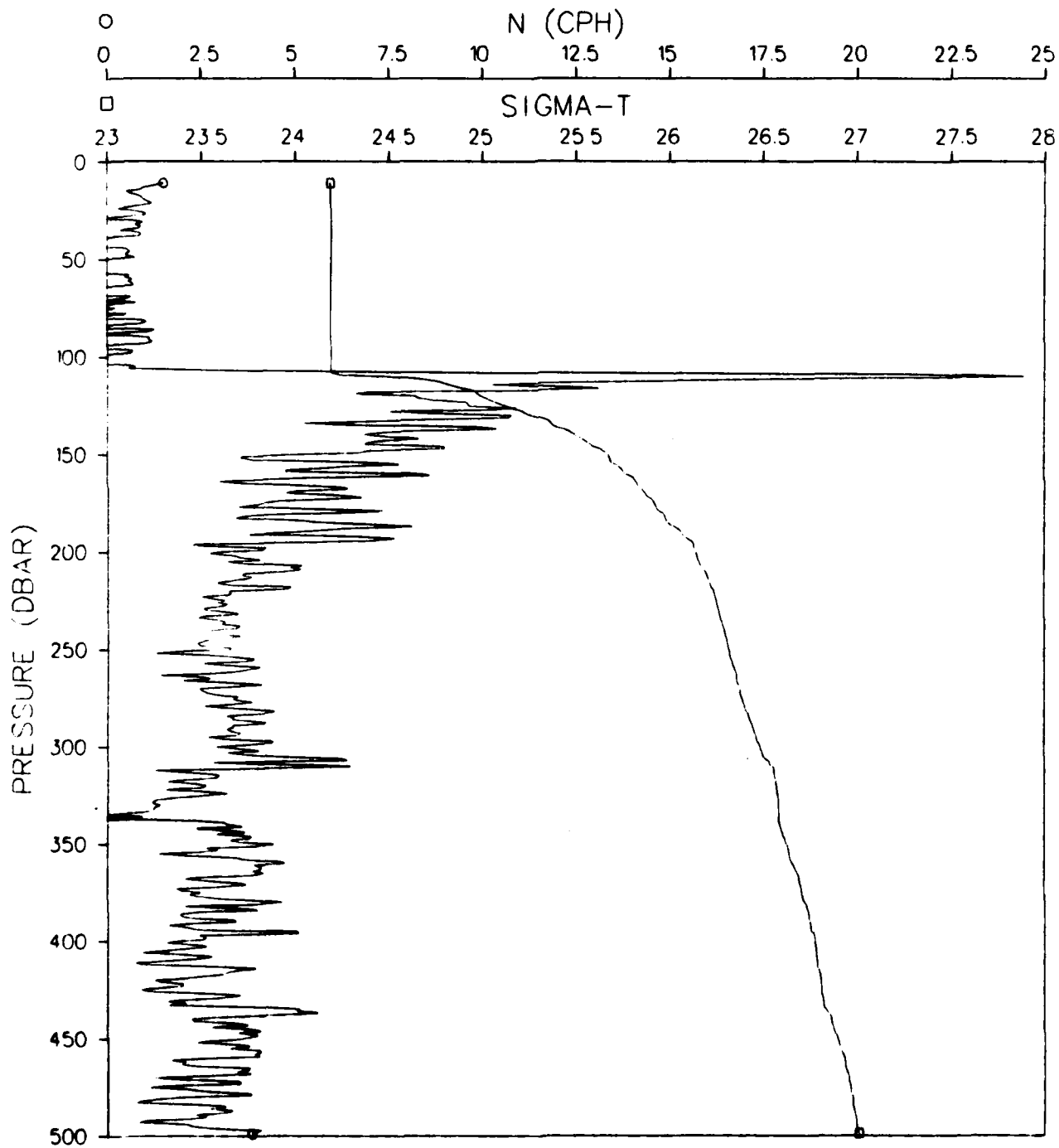


Figure 308.

ATOM 79 DEPLOYMENT
STATION 100005

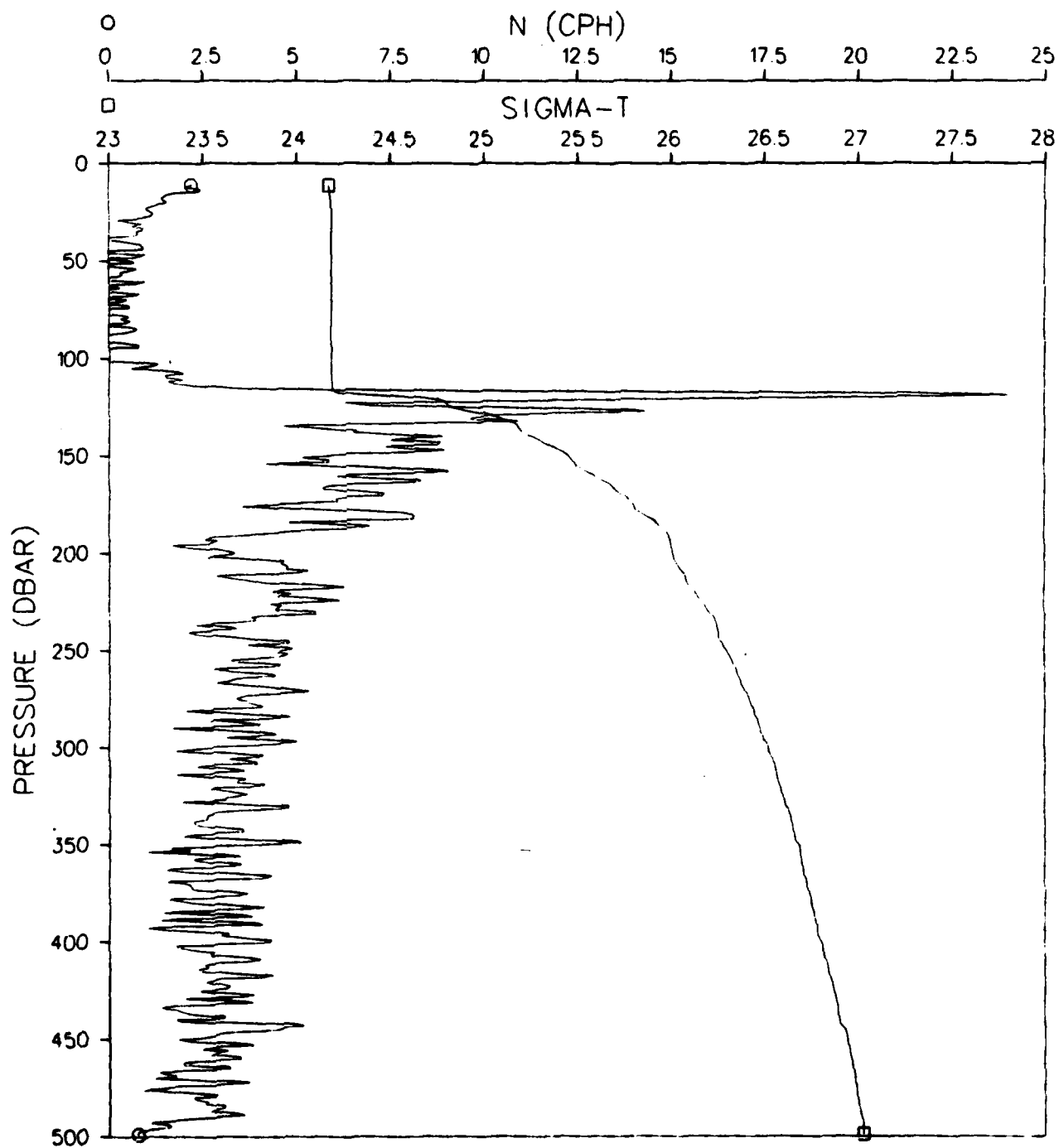


Figure 309.

ATOM 79 DEPLOYMENT
STATION 100006

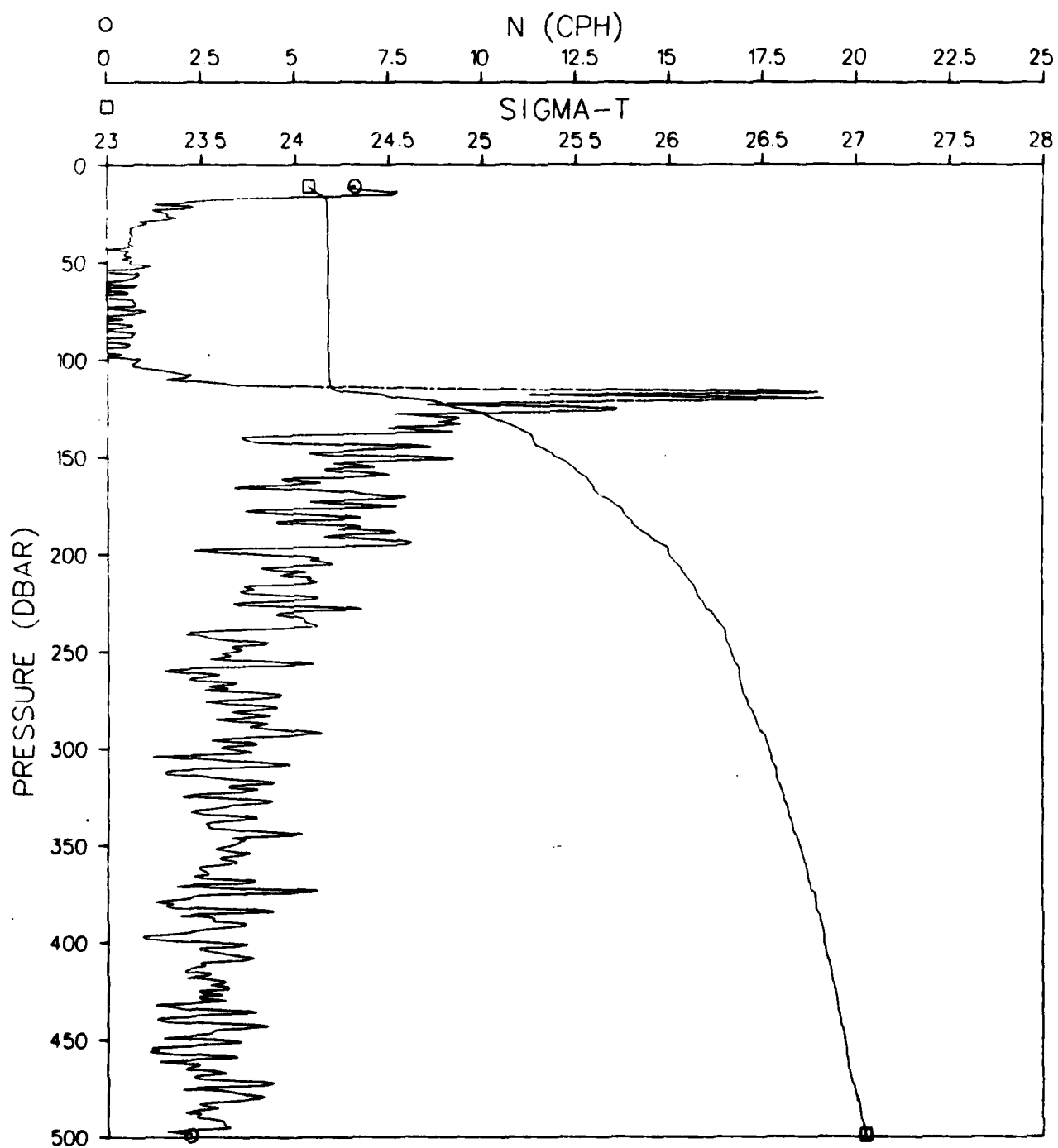


Figure 310.

ATOM 79 DEPLOYMENT
STATION 100007

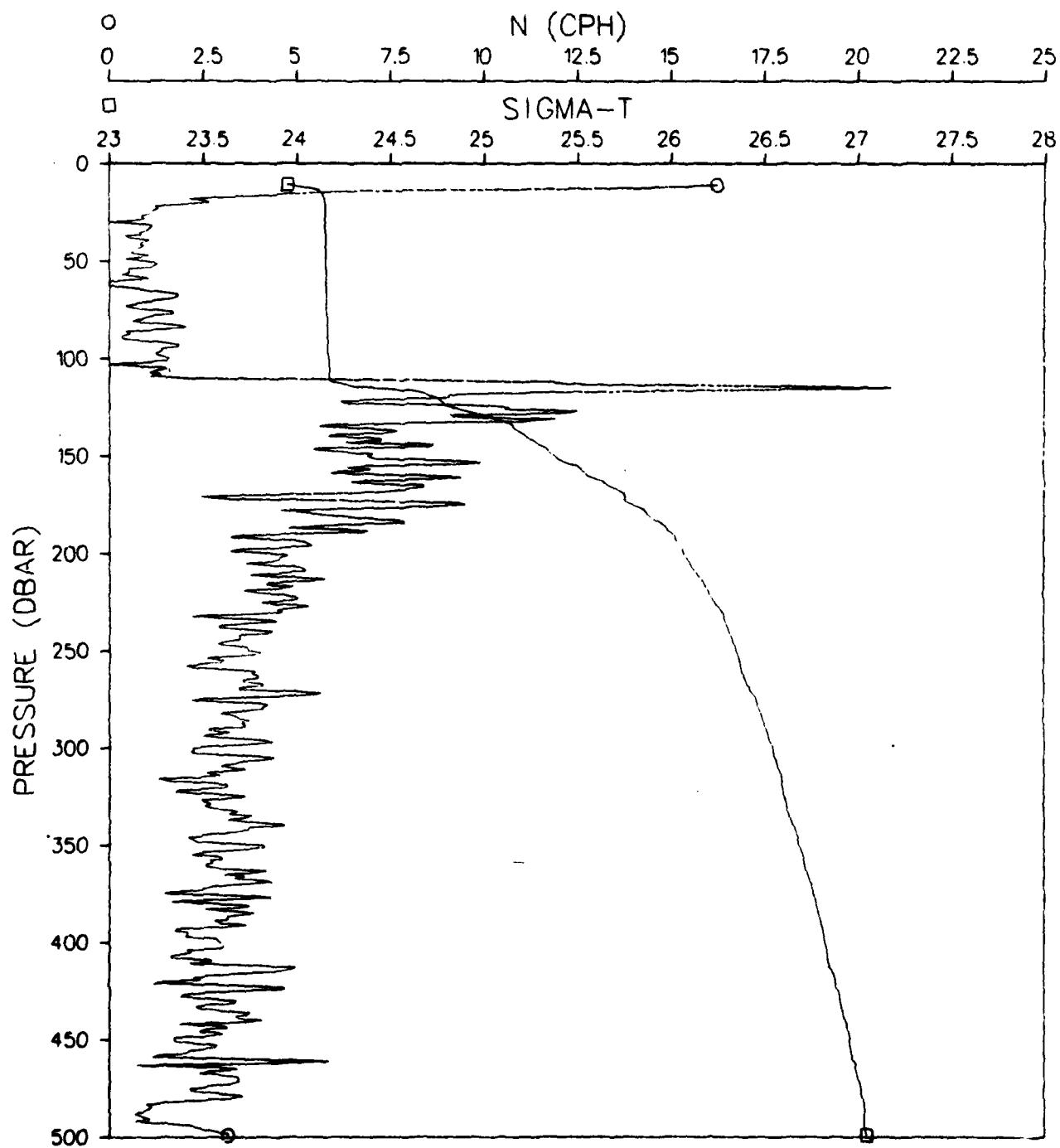


Figure 311.

ATOM 79 DEPLOYMENT
STATION 100008

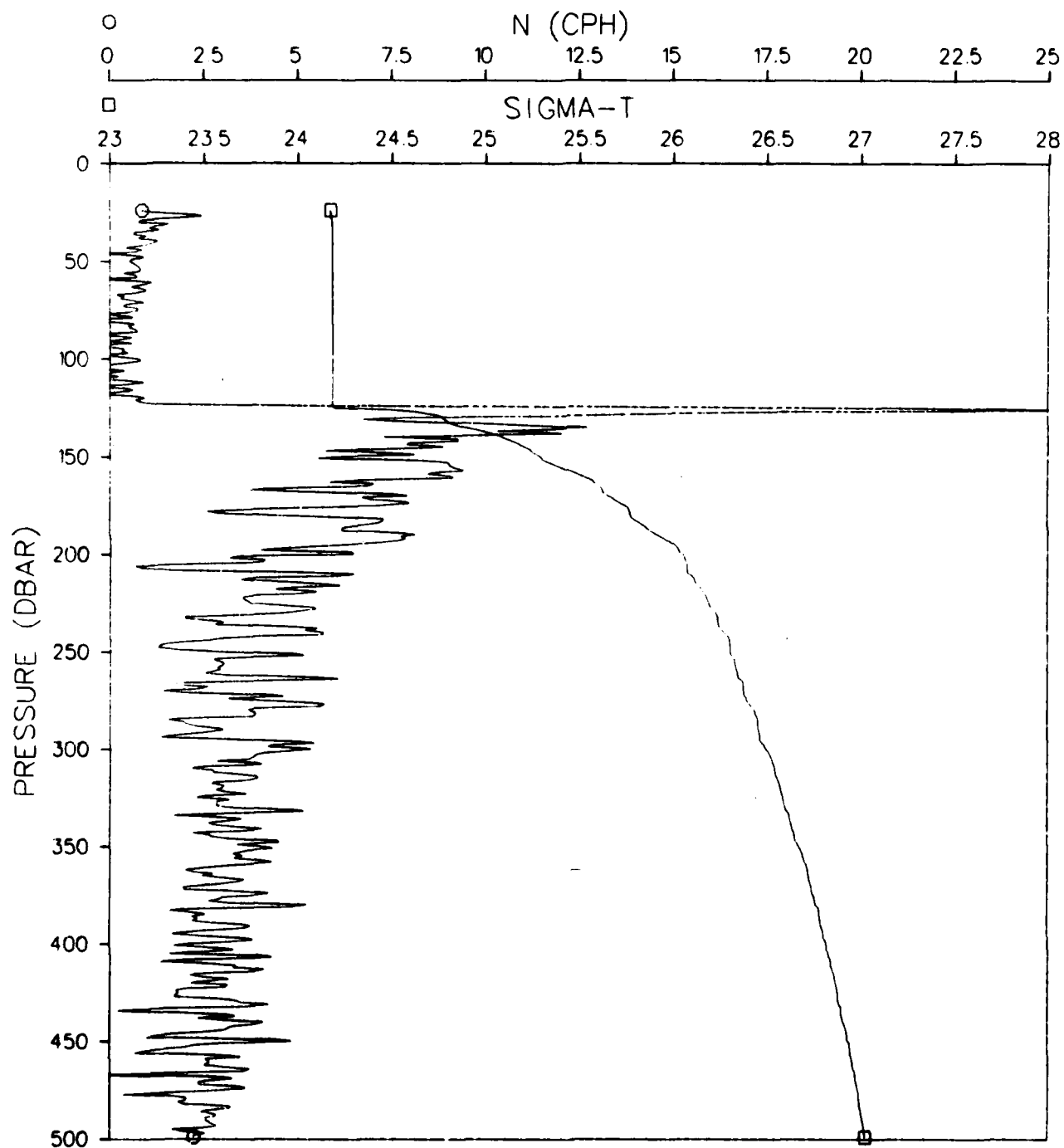


Figure 312.

ATOM 79 DEPLOYMENT
STATION 100009

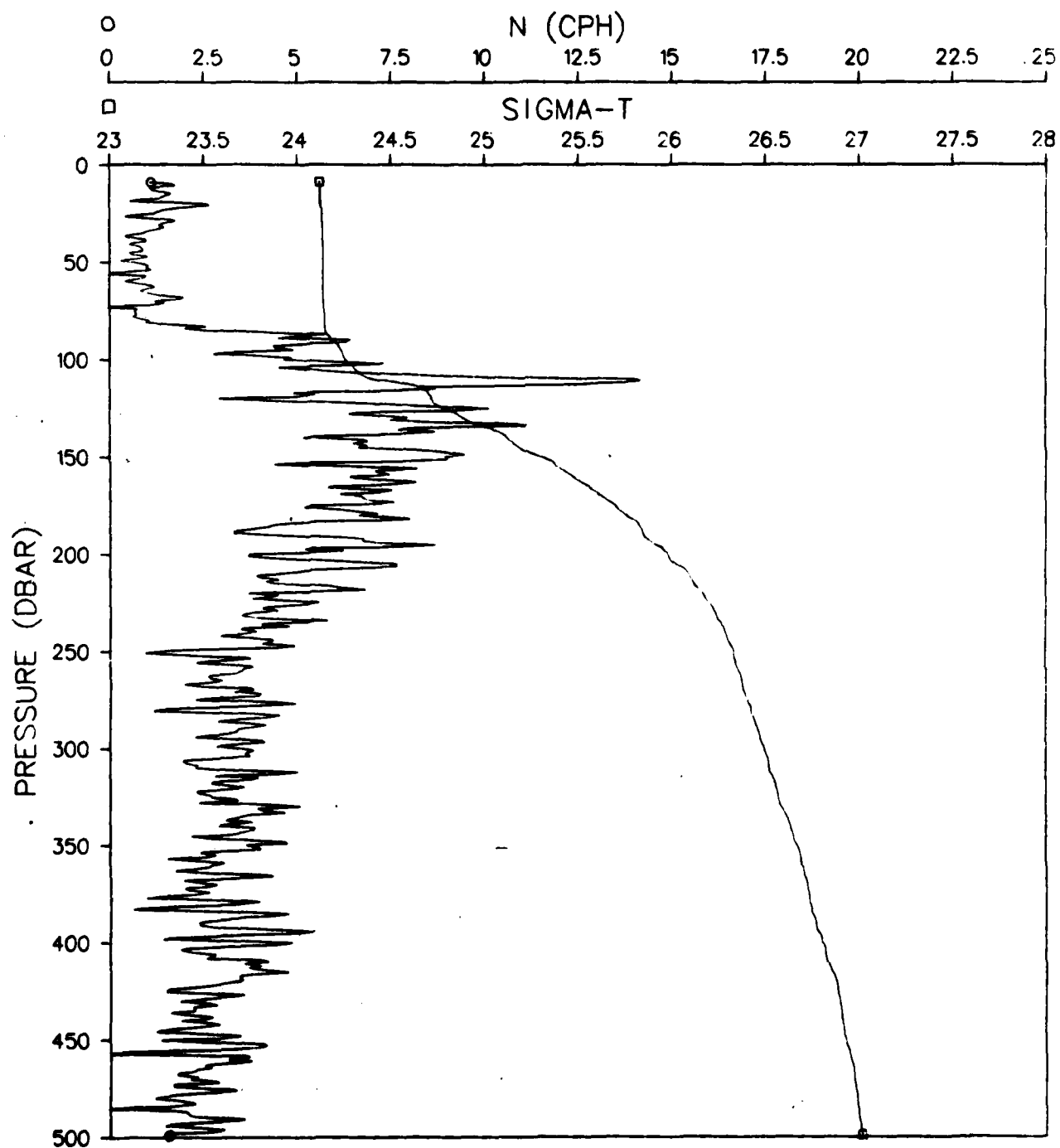


Figure 313.

ATOM 79 DEPLOYMENT STATION 100010

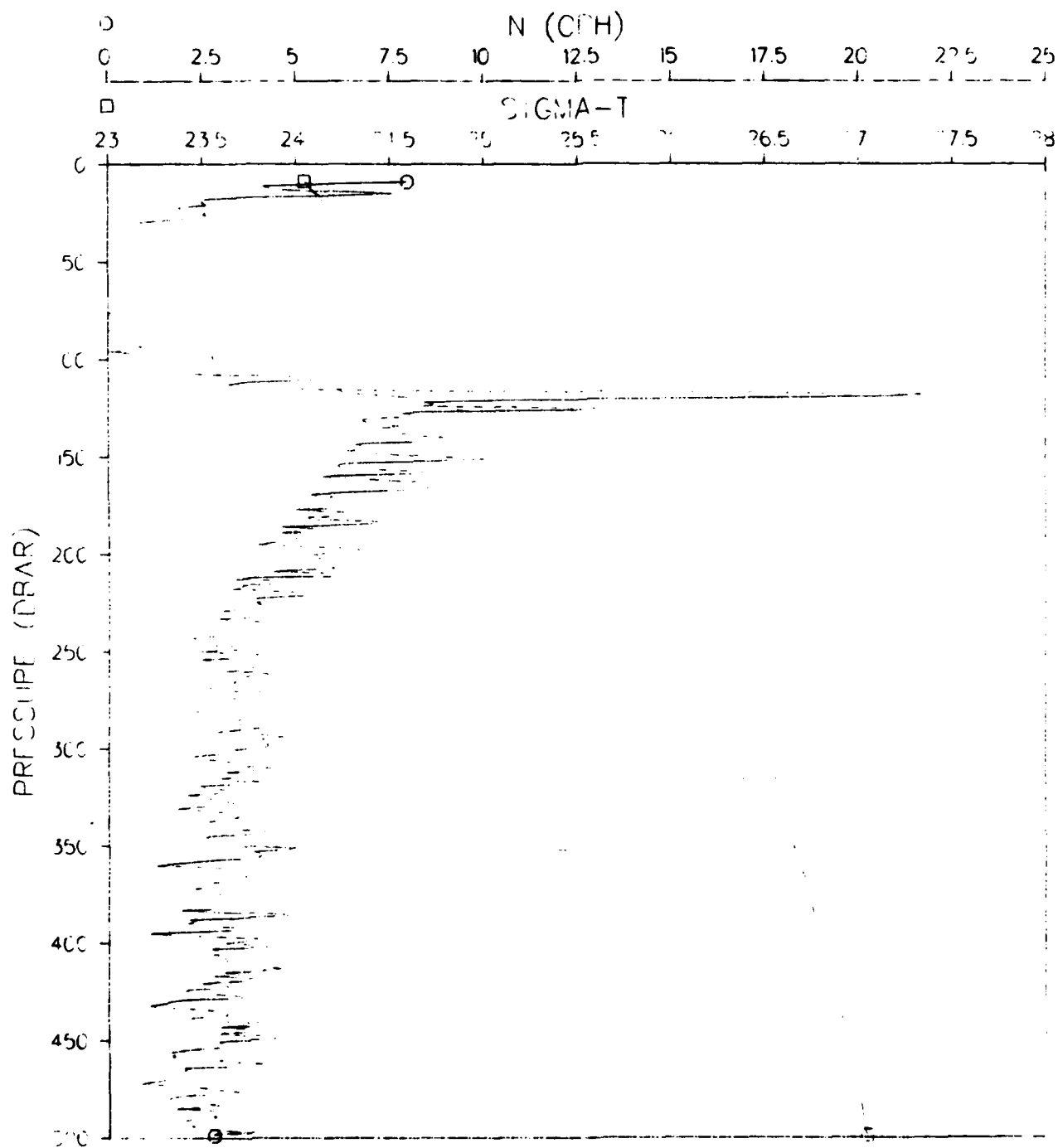


Figure 314.

ATOM 79 DEPLOYMENT
STATION 100011

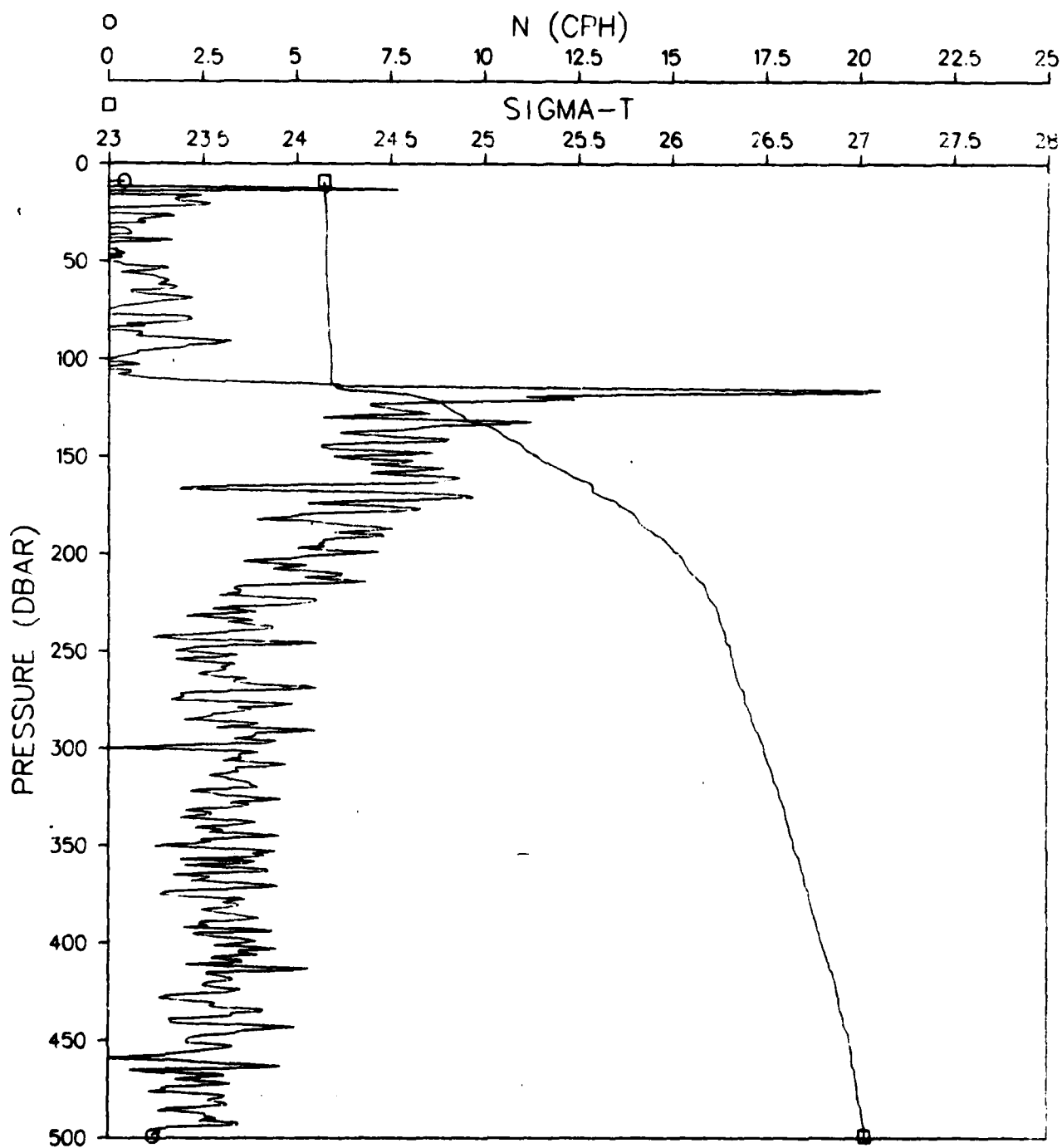


Figure 315.

ATOM 79 DEPLOYMENT
STATION 100012

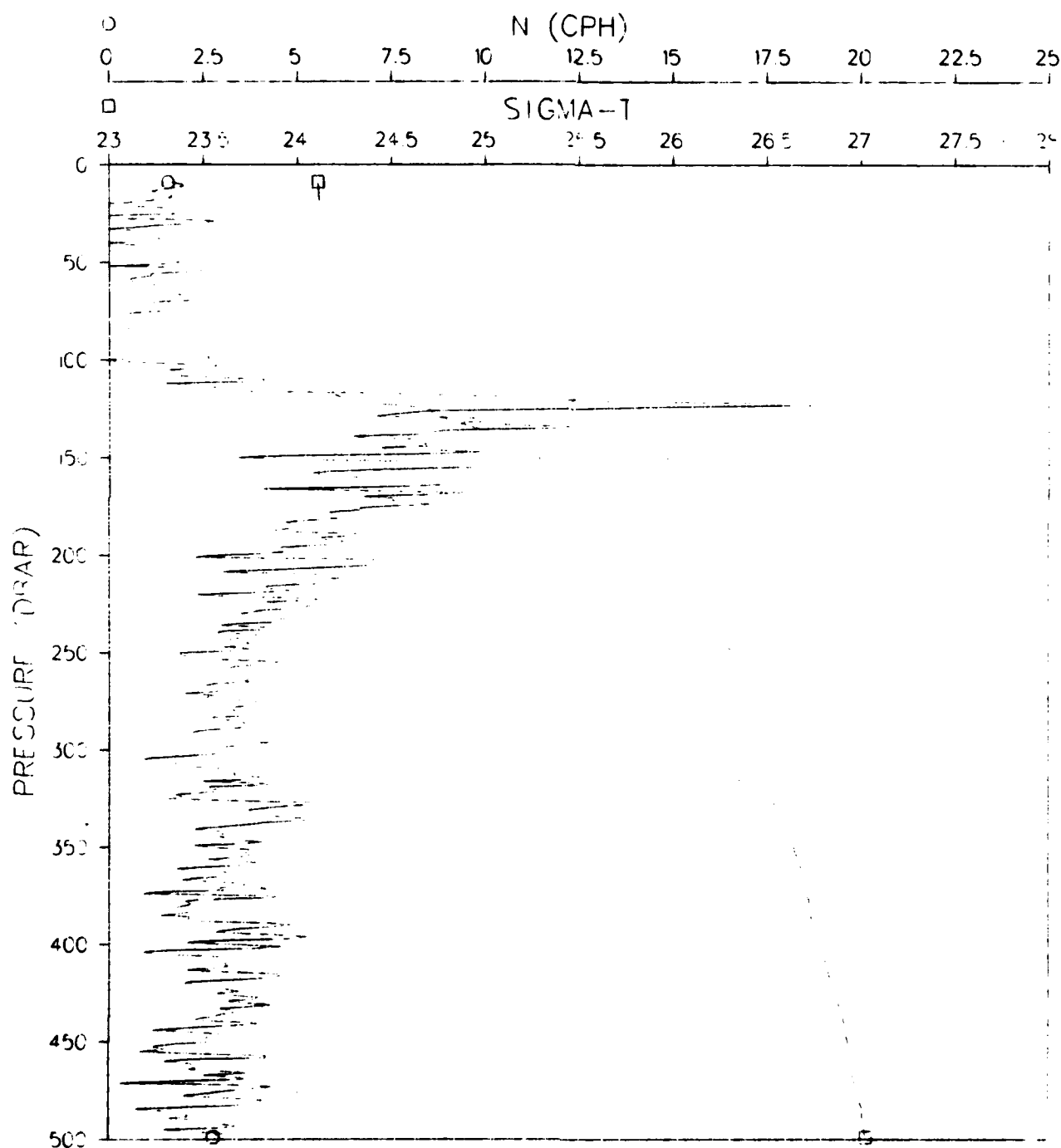


Figure 316.

ATOM 79 DEPLOYMENT
STATION 100013

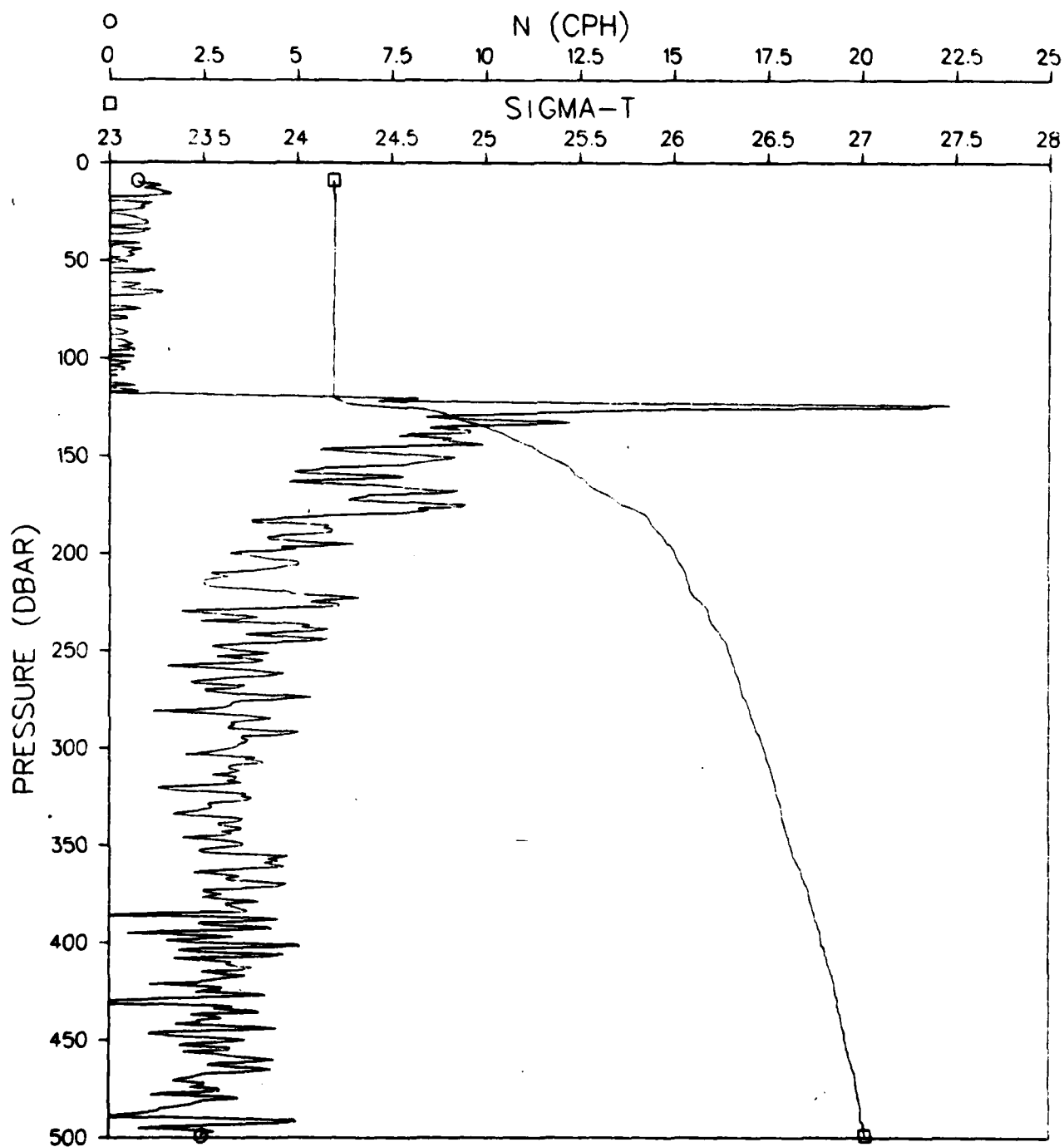


Figure 317.

ATOM 79 DEPLOYMENT
STATION 100014

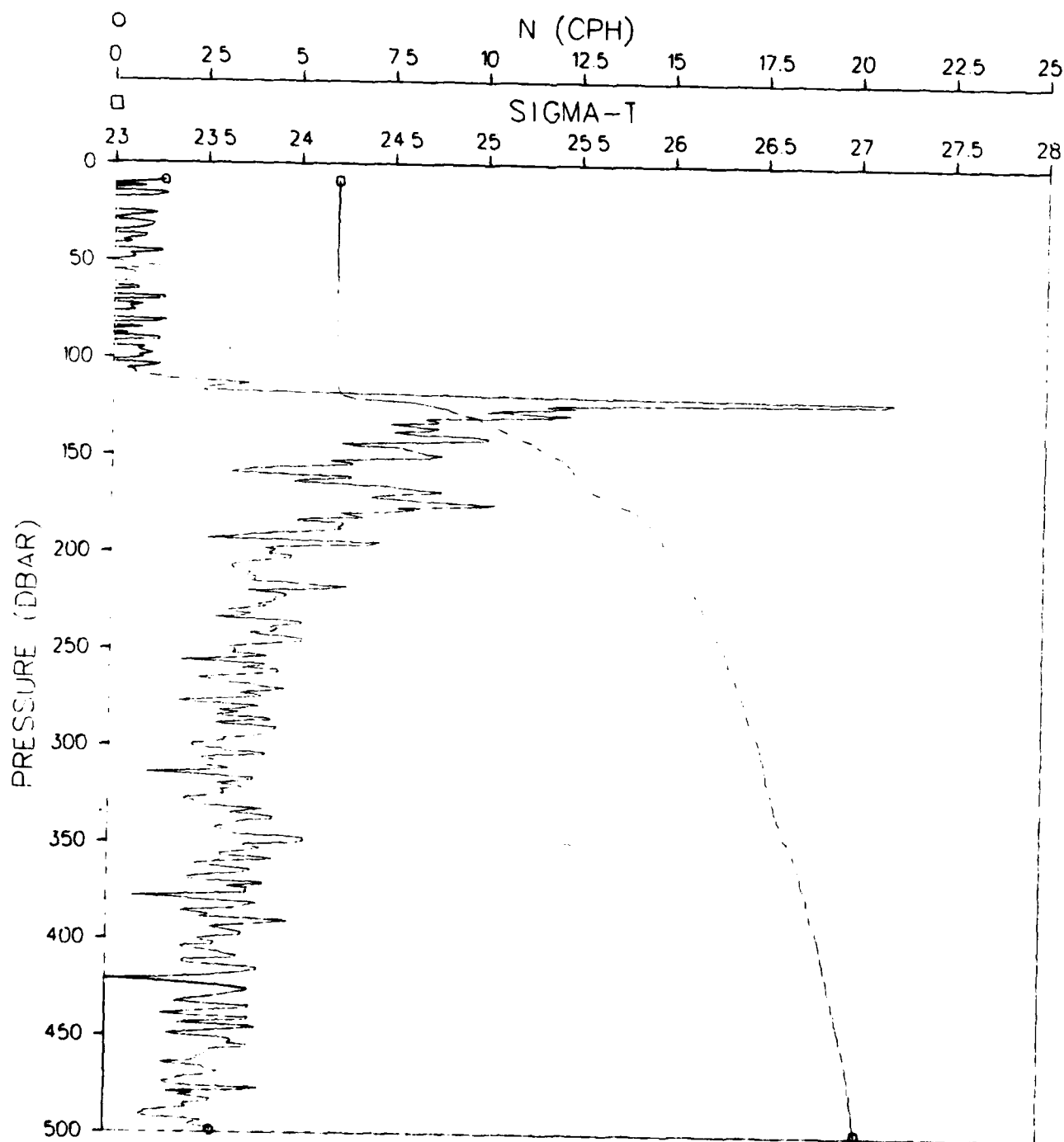


Figure 318.

ATOM 79 DEPLOYMENT
STATION 100015

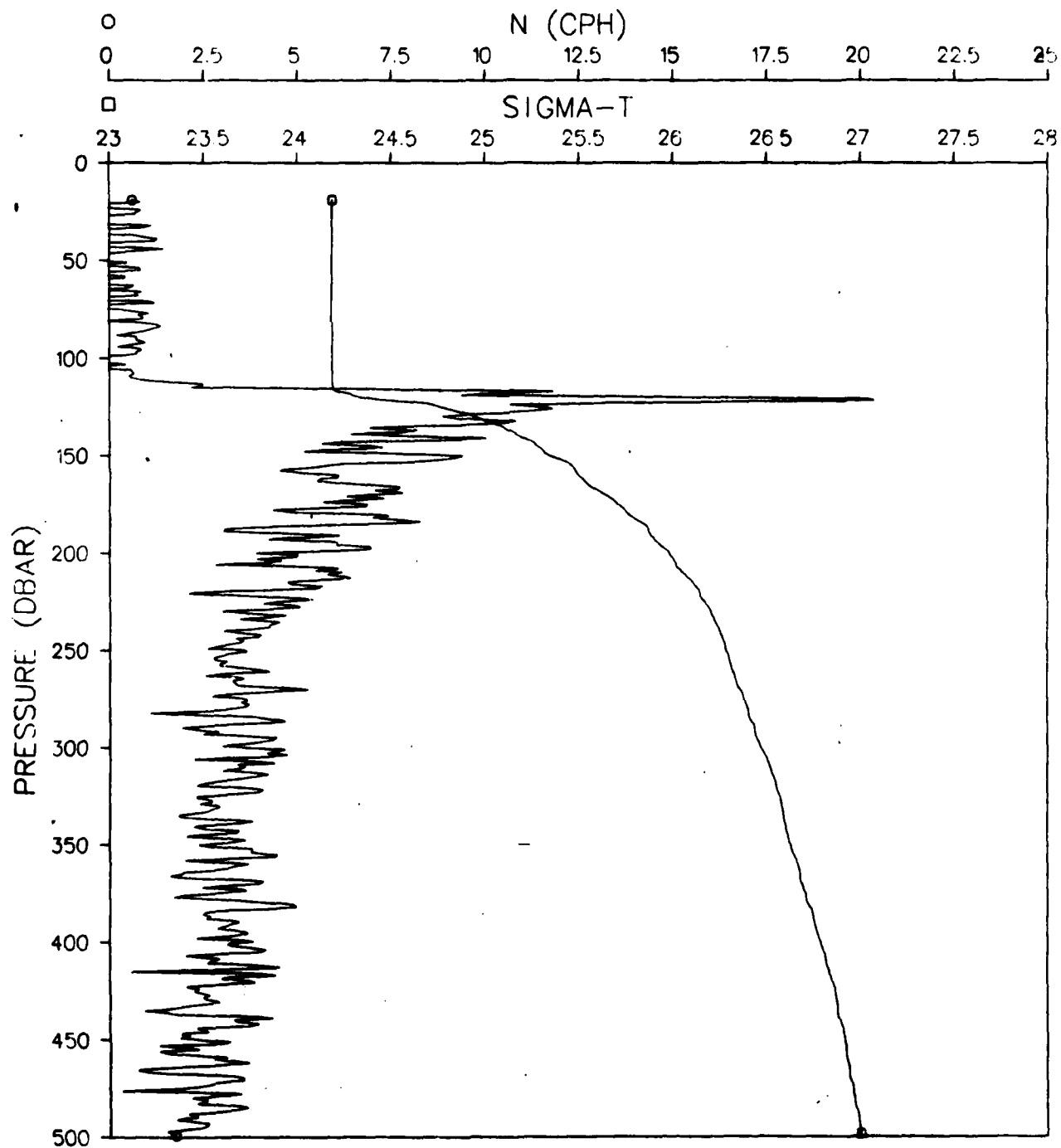


Figure 319.

ATOM 79 DEPLOYMENT STATION 100016

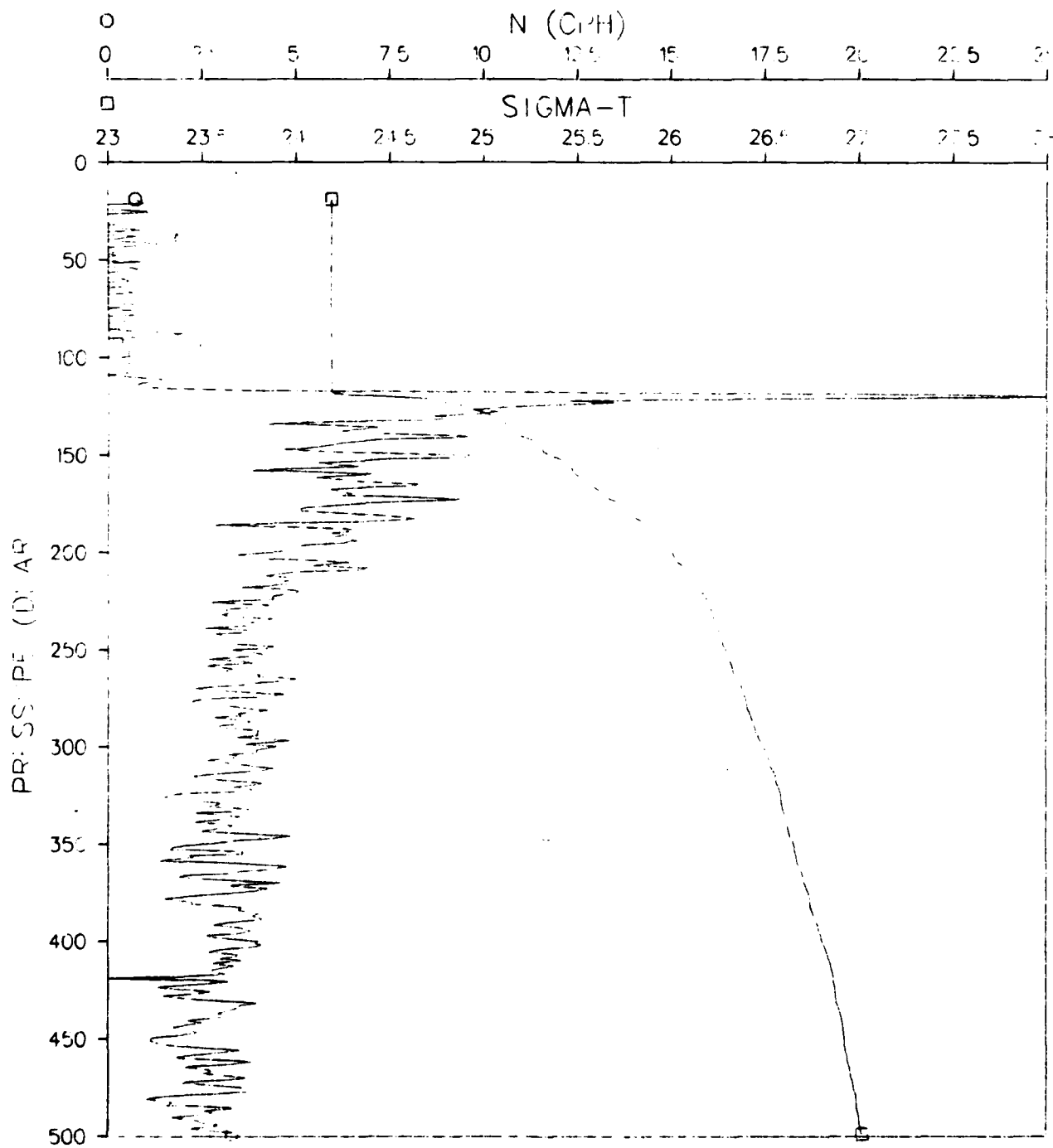


Figure 320.

ATOM 79 DEPLOYMENT
STATION 100017

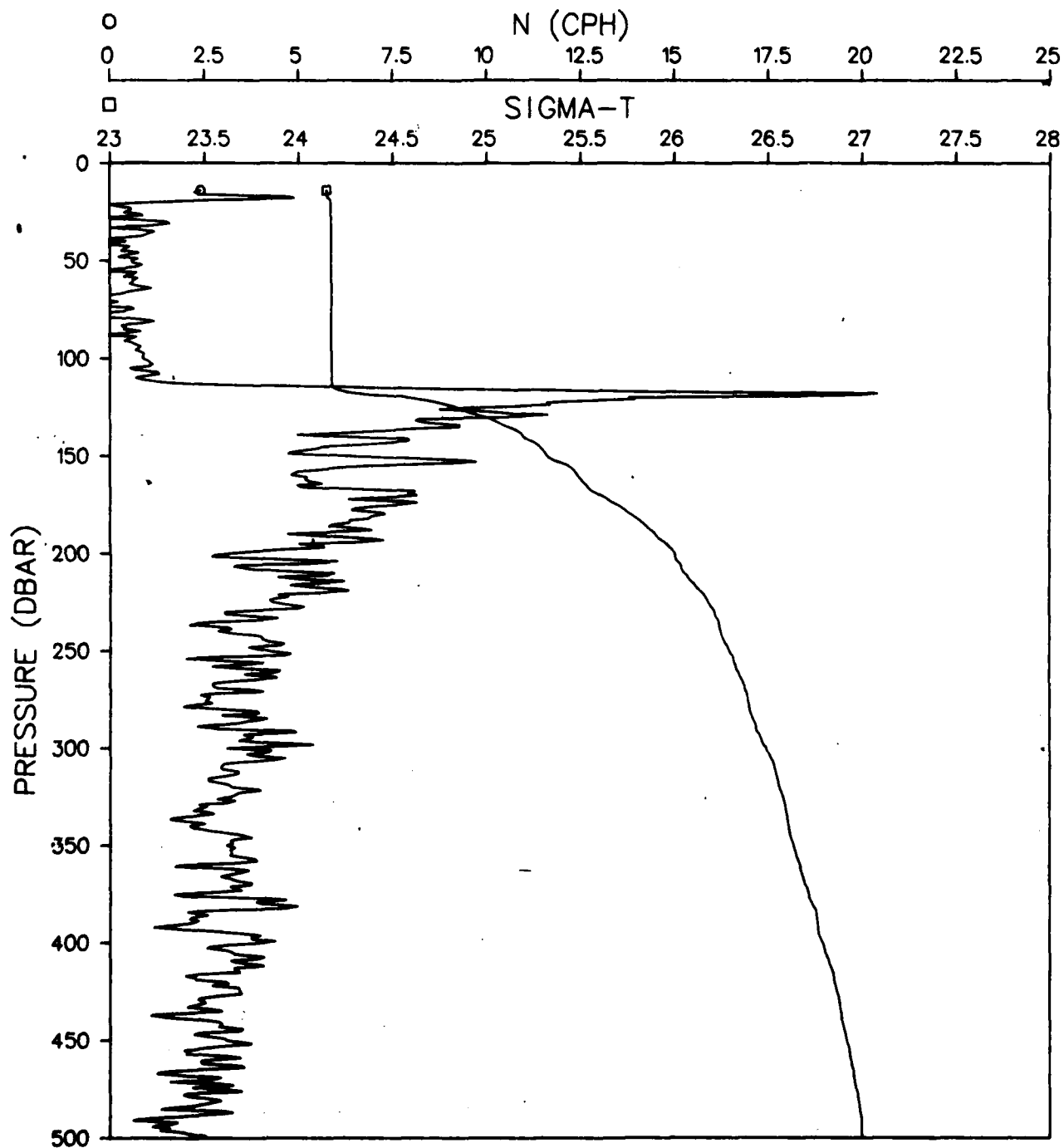


Figure 321.

ATOM 79 DEPLOYMENT
STATION 100018

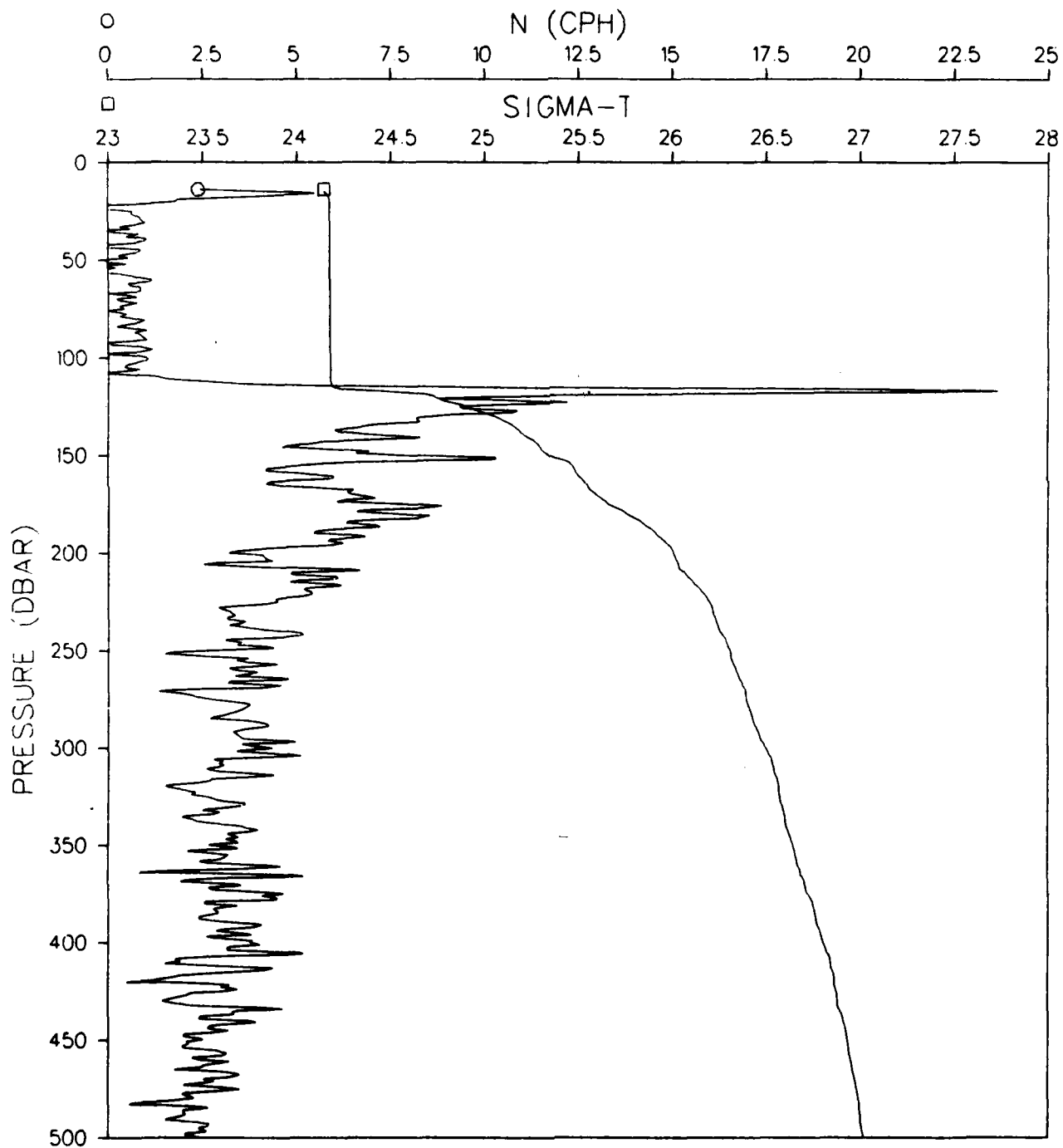


Figure 322.

ATOM 79 DEPLOYMENT
STATION 100019

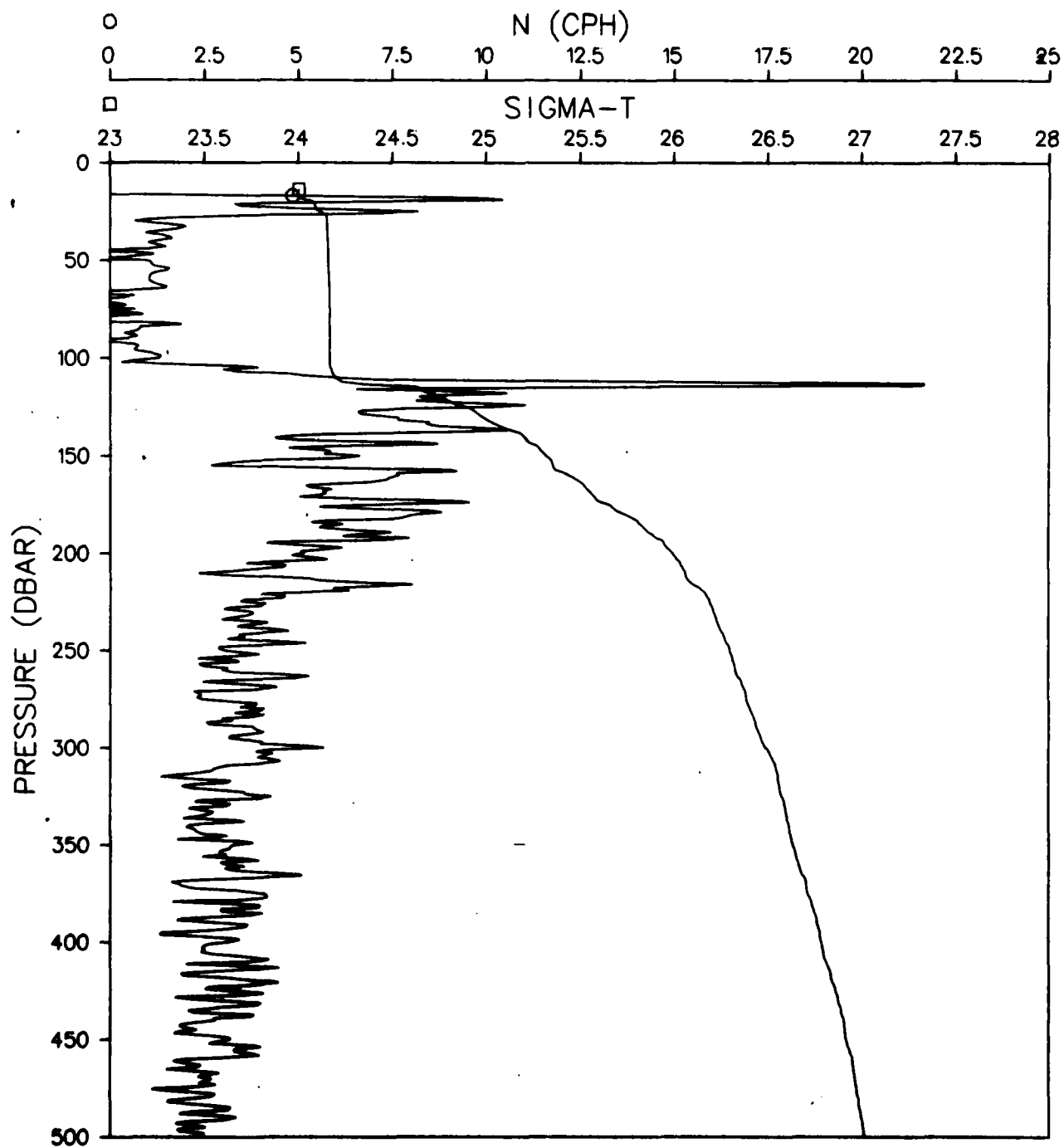


Figure 323.

ATOM 79 DEPLOYMENT
STATION 100020

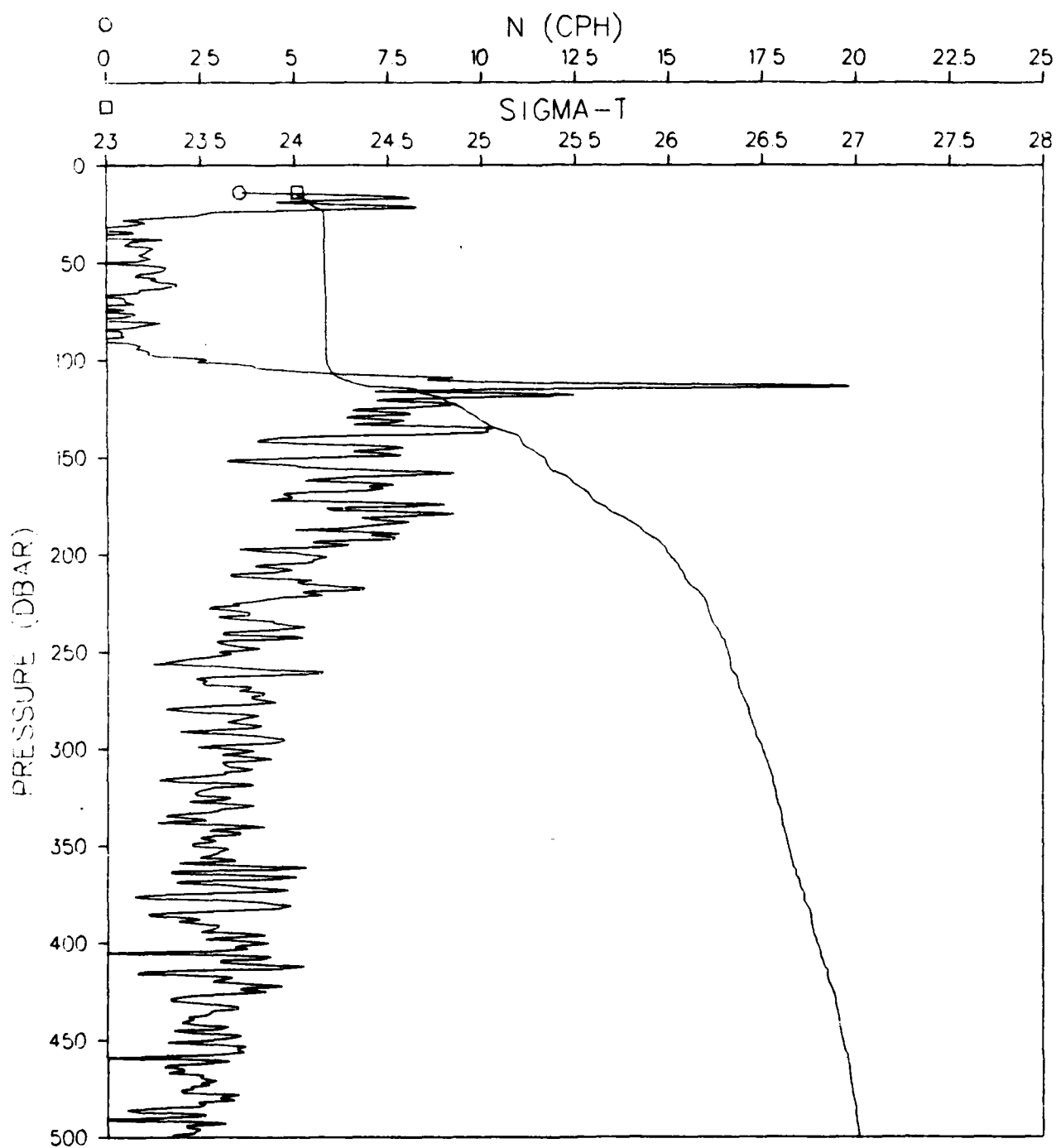


Figure 324.

ATOM 79 DEPLOYMENT
STATION 100021

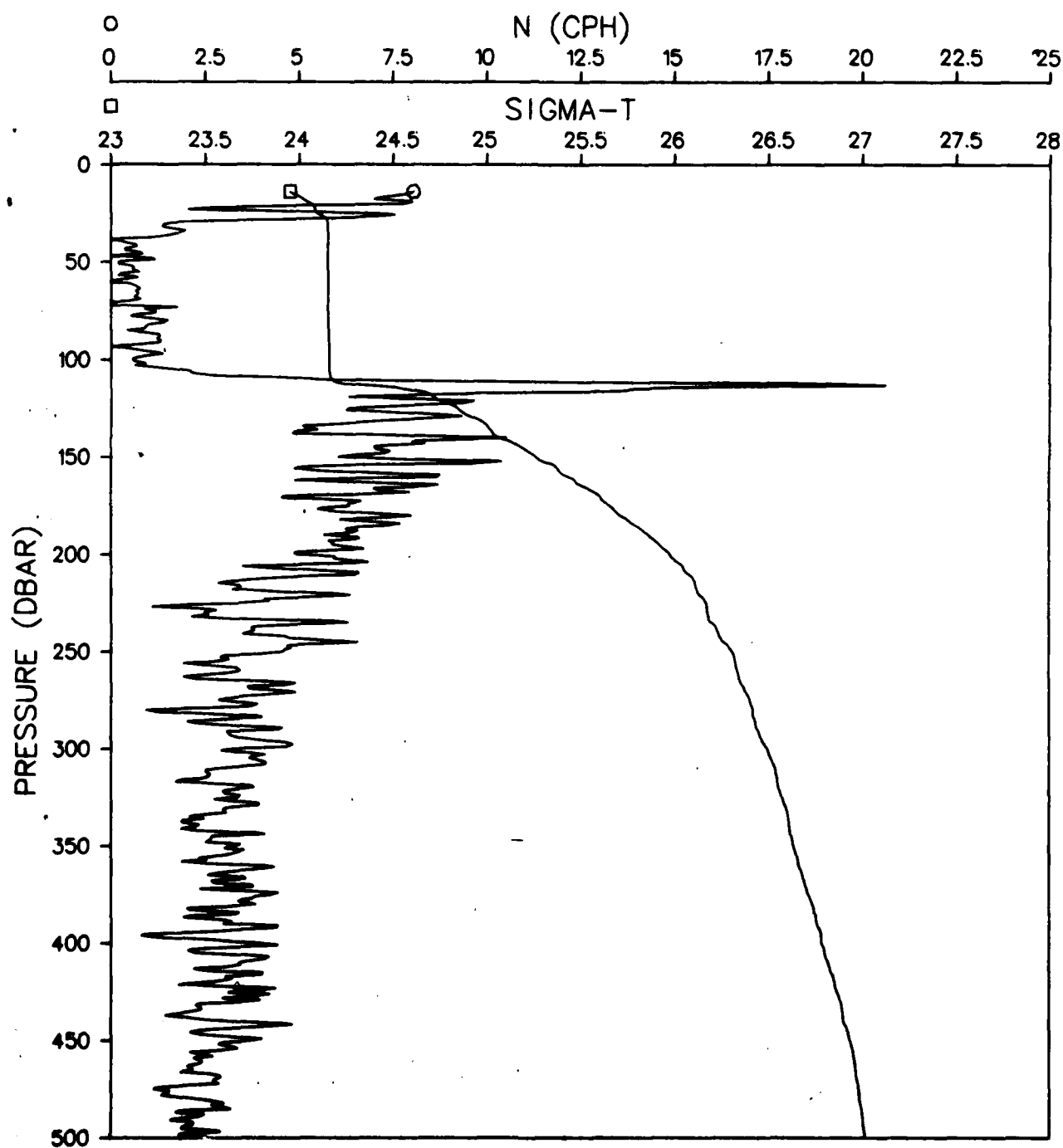


Figure 325.

ATOM 79 DEPLOYMENT
STATION 100022

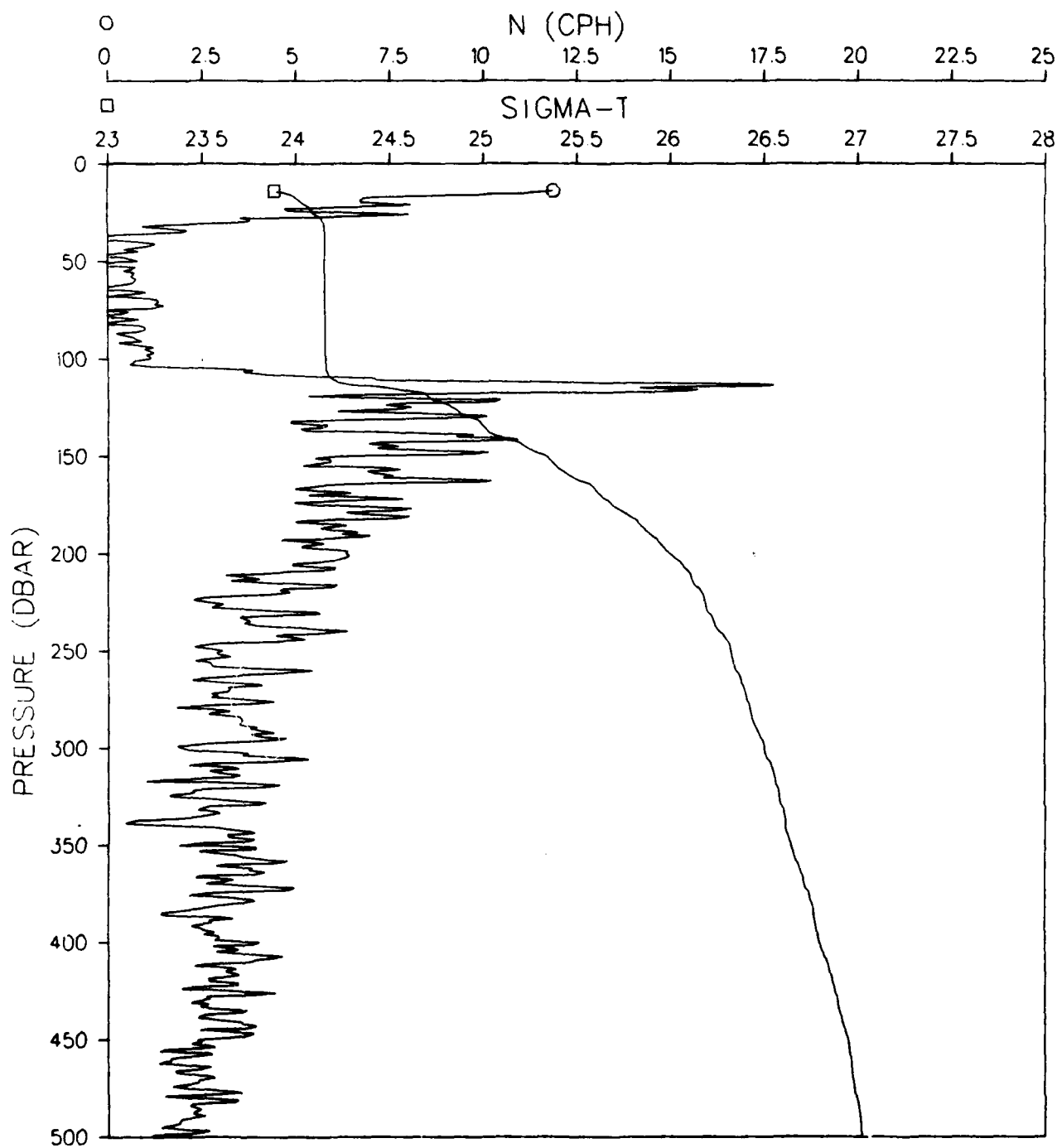


Figure 326.

ATOM 79 DEPLOYMENT
STATION 100023

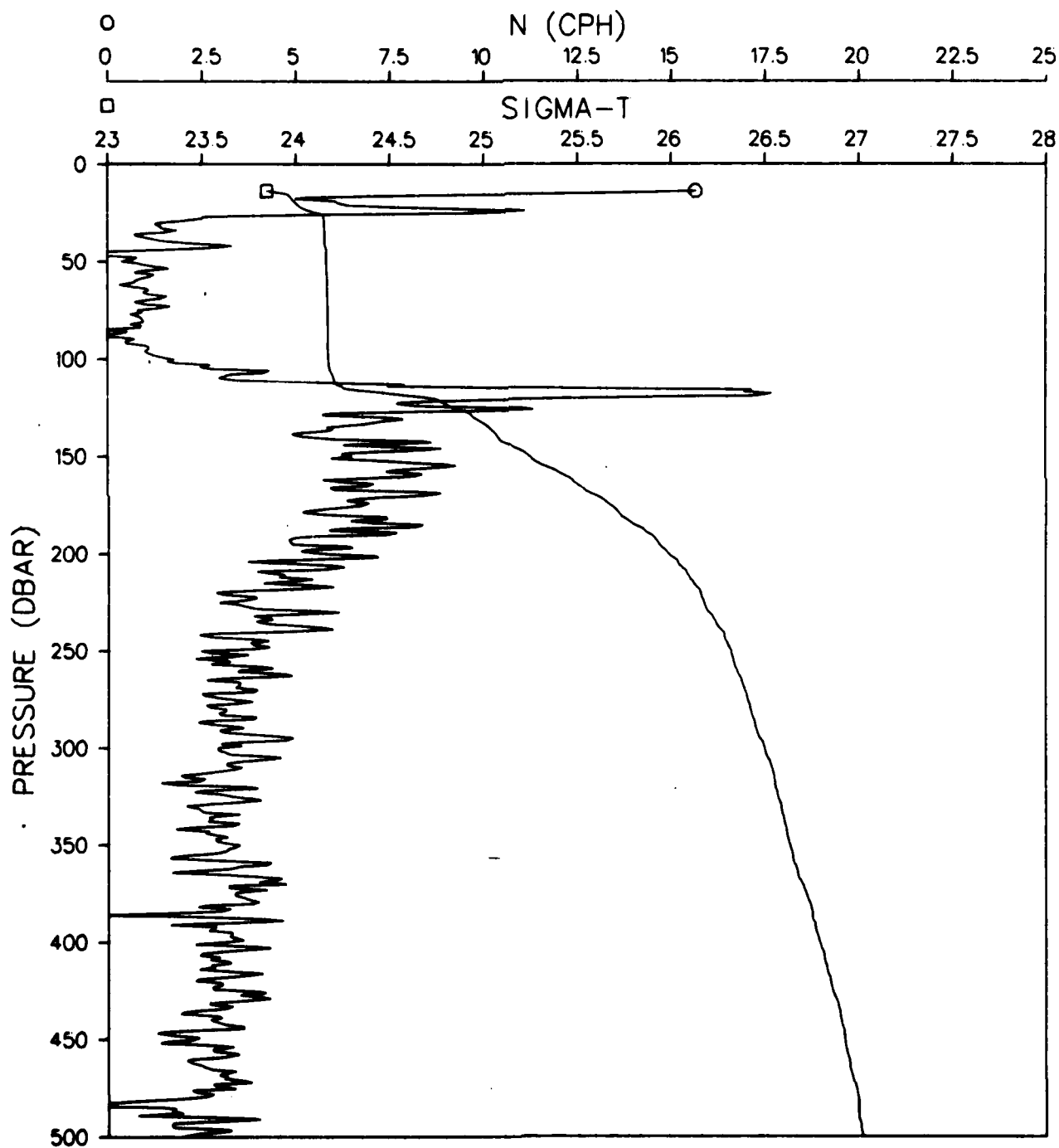


Figure 327.

ATOM 79 DEPLOYMENT
STATION 100024

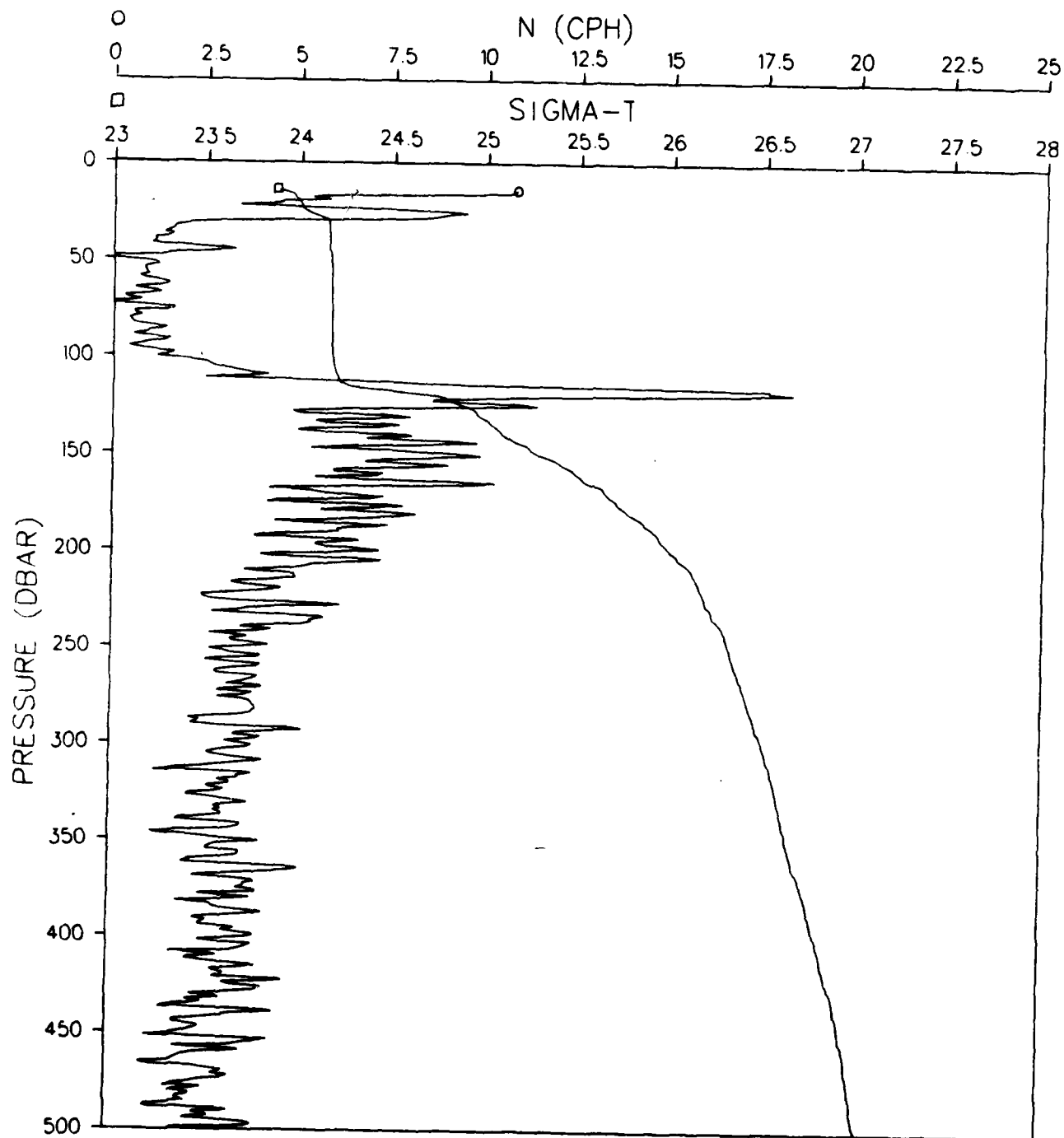


Figure 328.

ATOM 79 DEPLOYMENT
STATION 100025

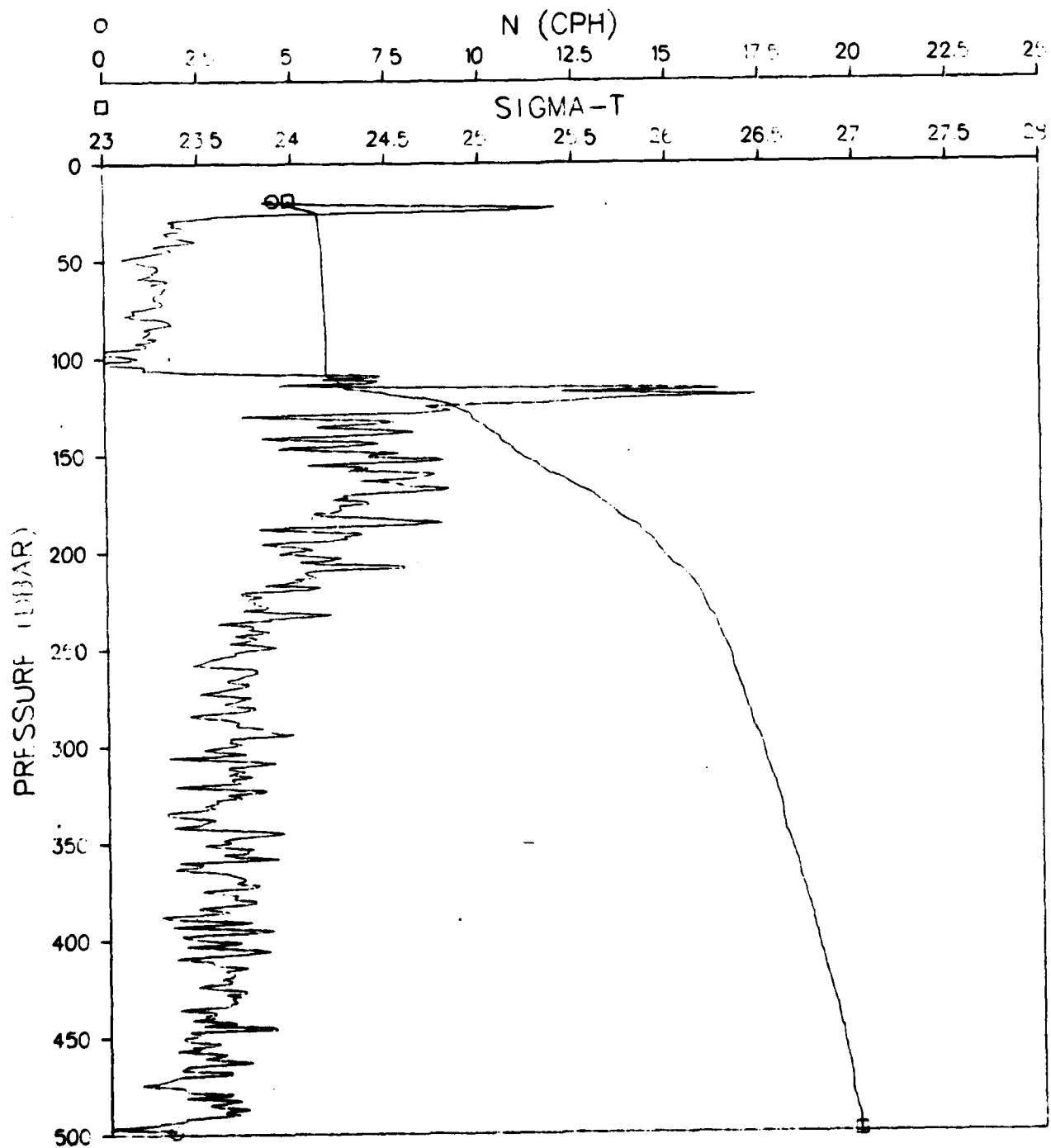


Figure 329.

ATOM 79 DEPLOYMENT STATION 100026

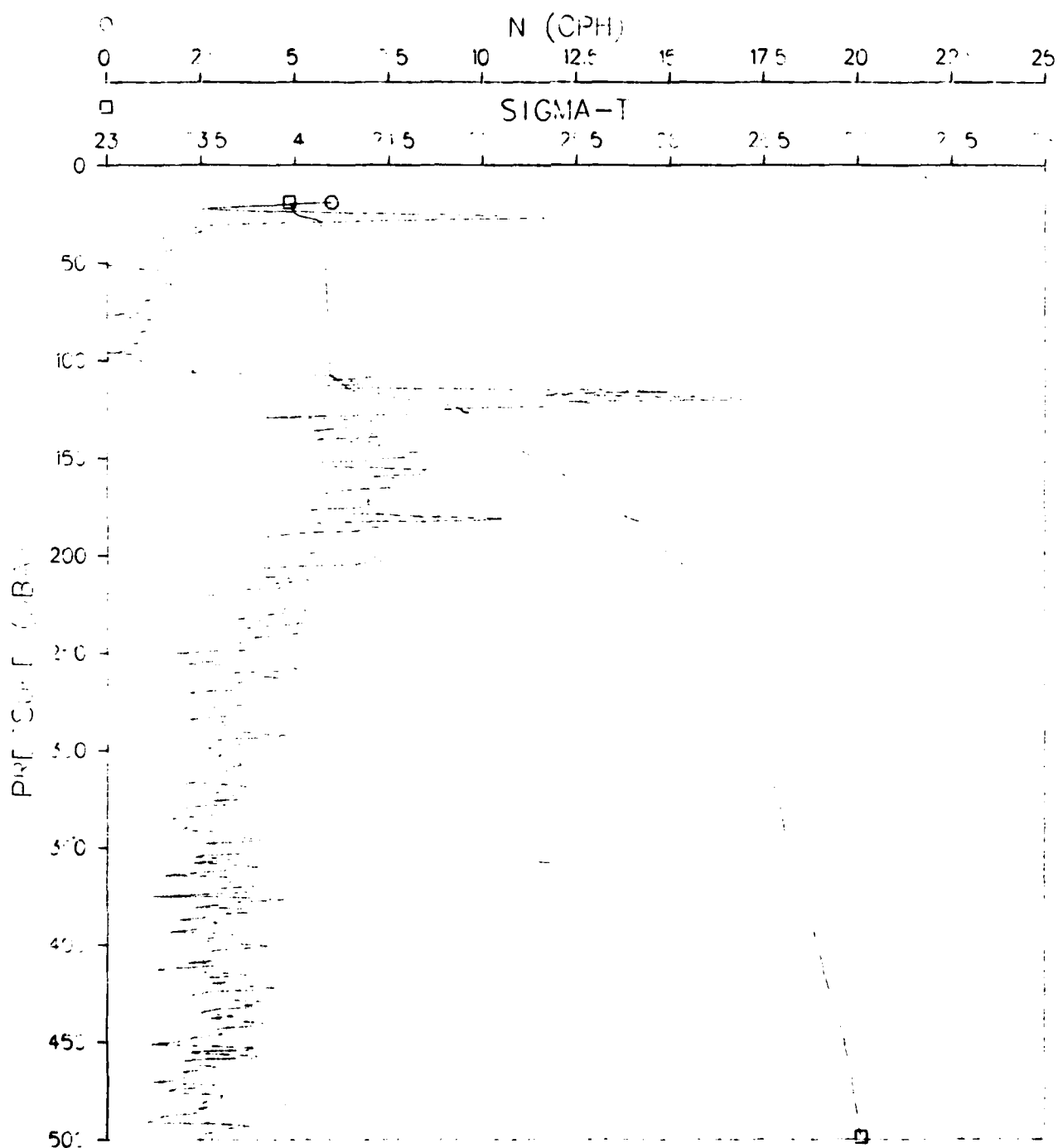


Figure 330.

ATOM 79 DEPLOYMENT
STATION 100027

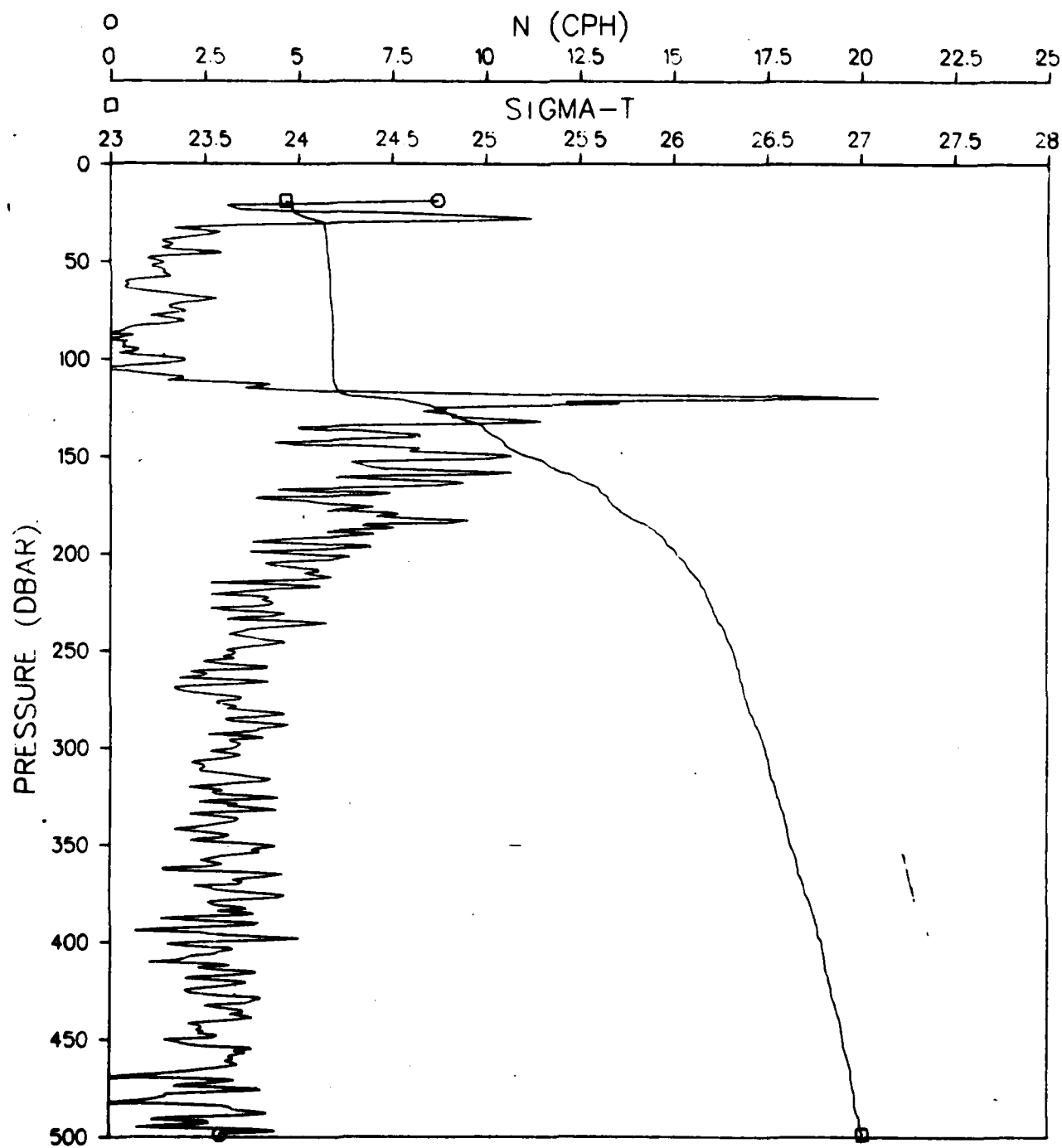


Figure 331.

ATOM 79 DEPLOYMENT
STATION 100028

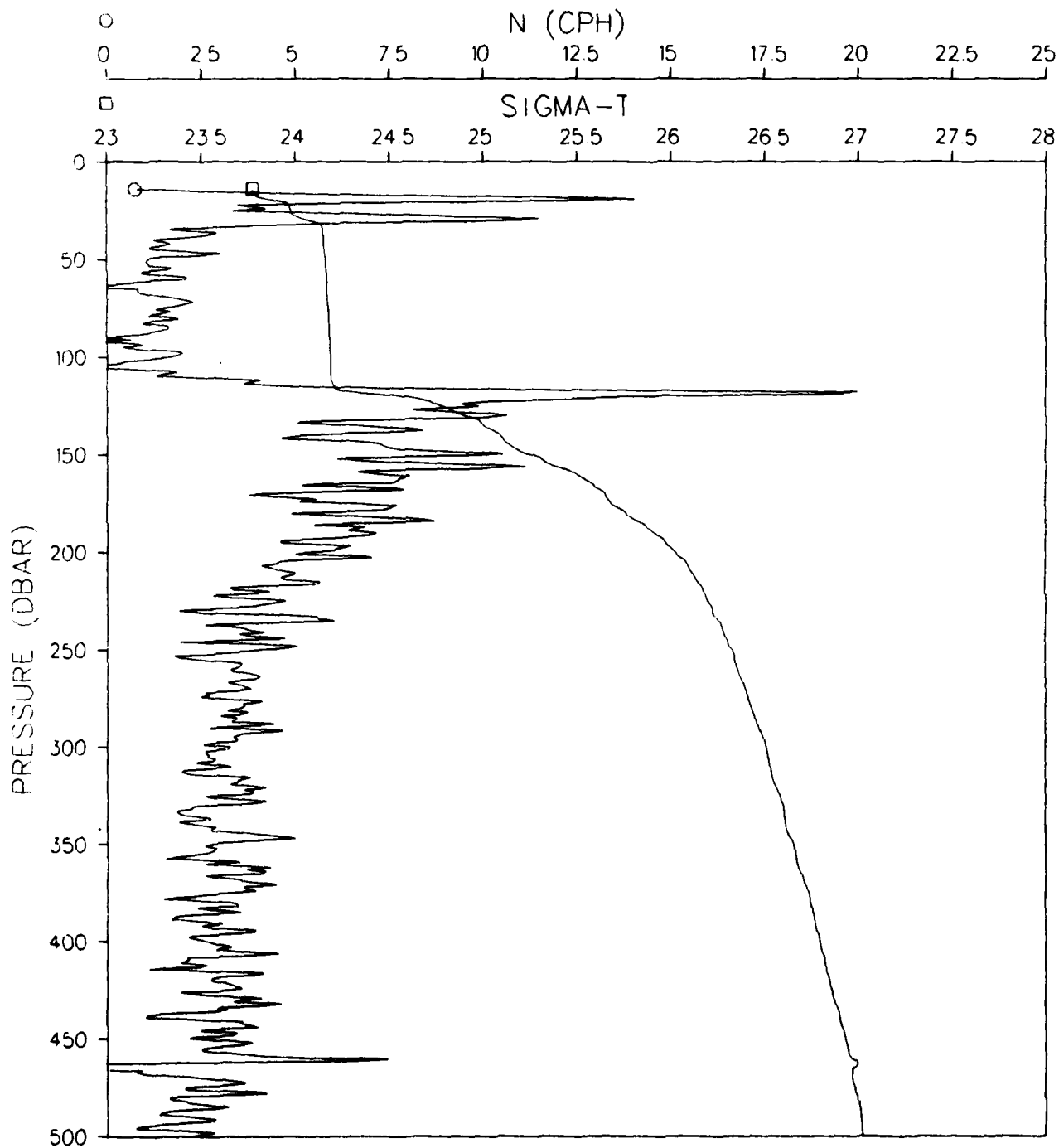


Figure 332.

ATOM 79 DEPLOYMENT
STATION 100029

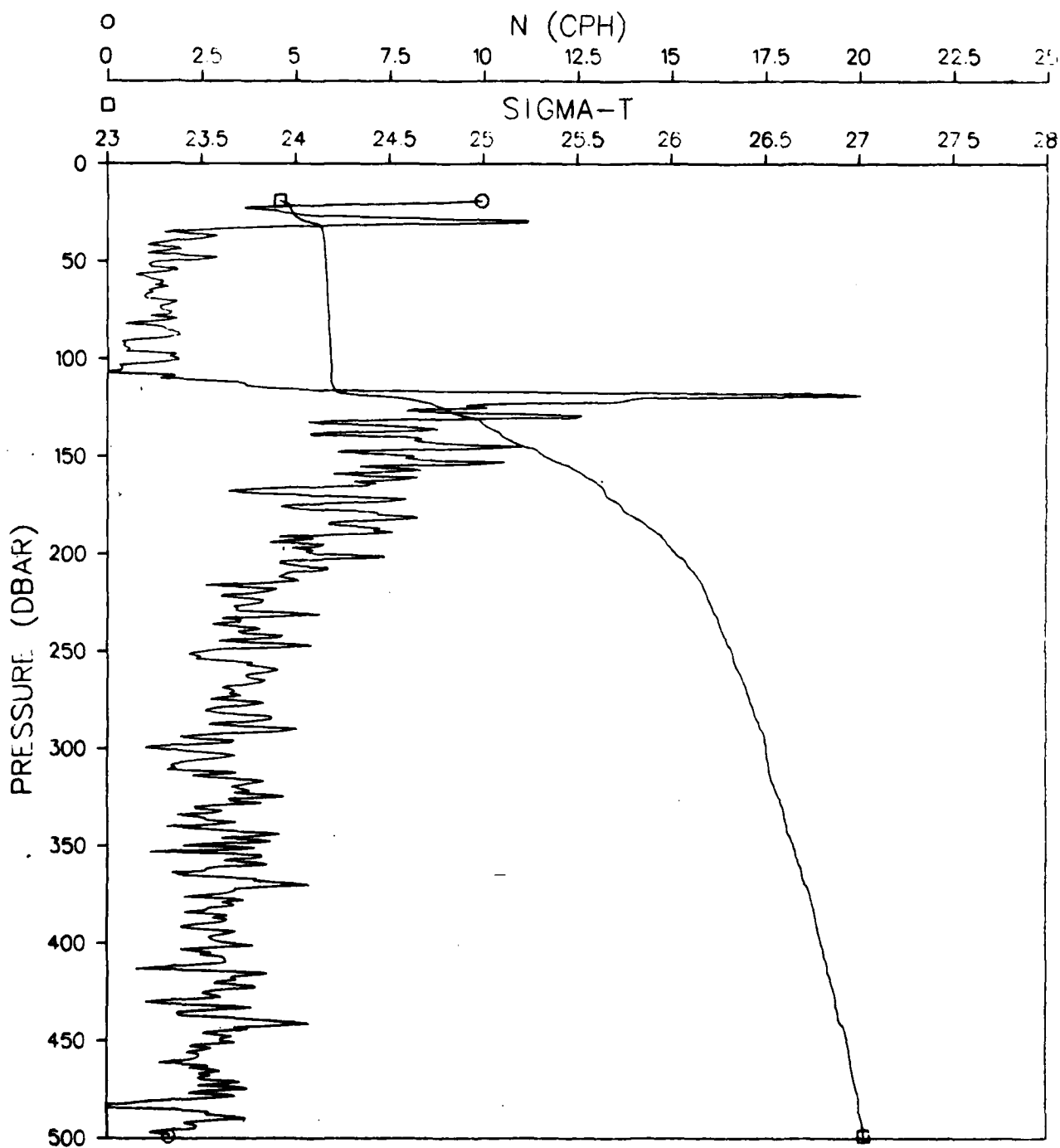


Figure 333.

ATOM 79 DEPLOYMENT STATION 100030

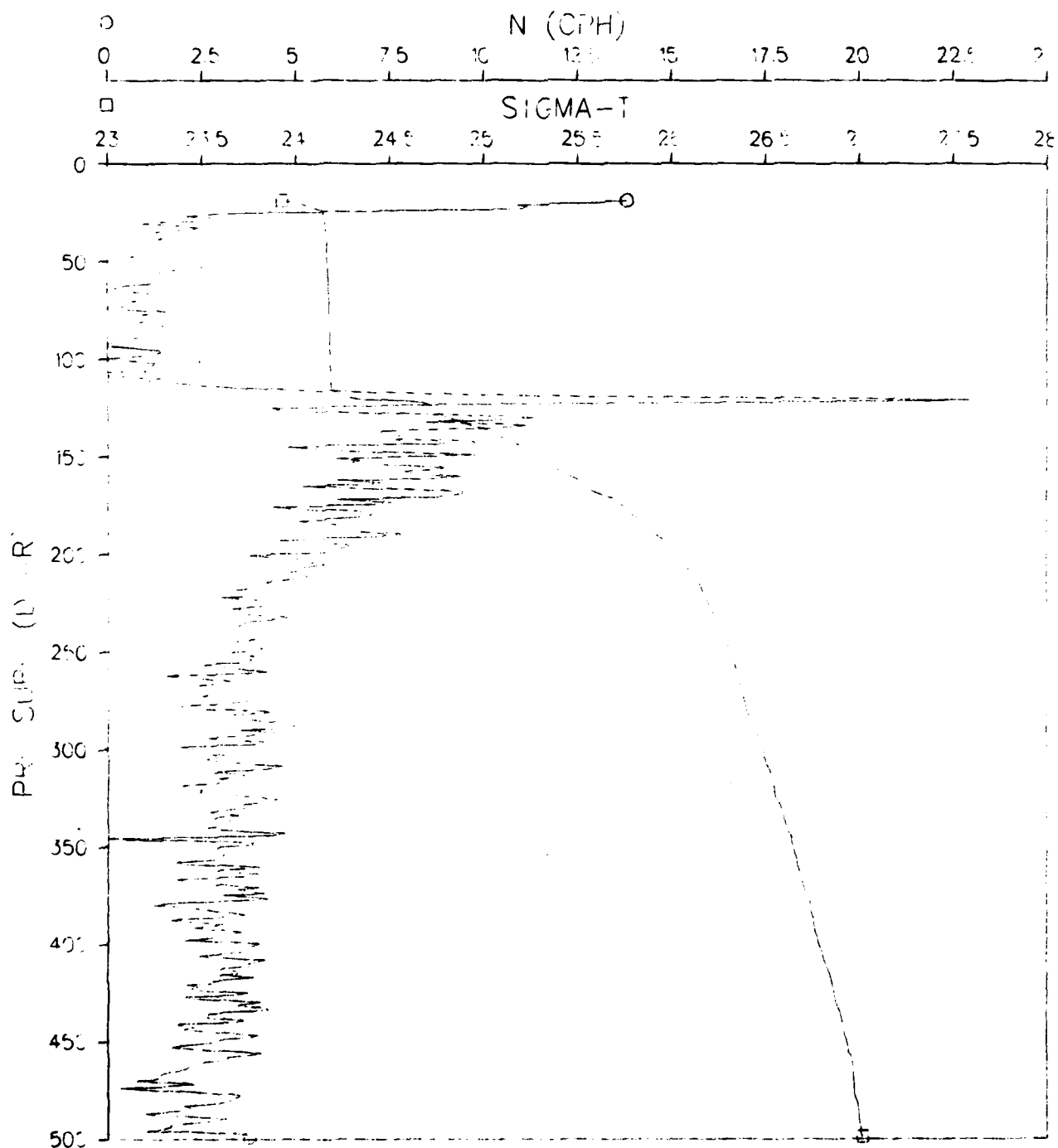


Figure 334.

ATOM 79 DEPLOYMENT
STATION 100031

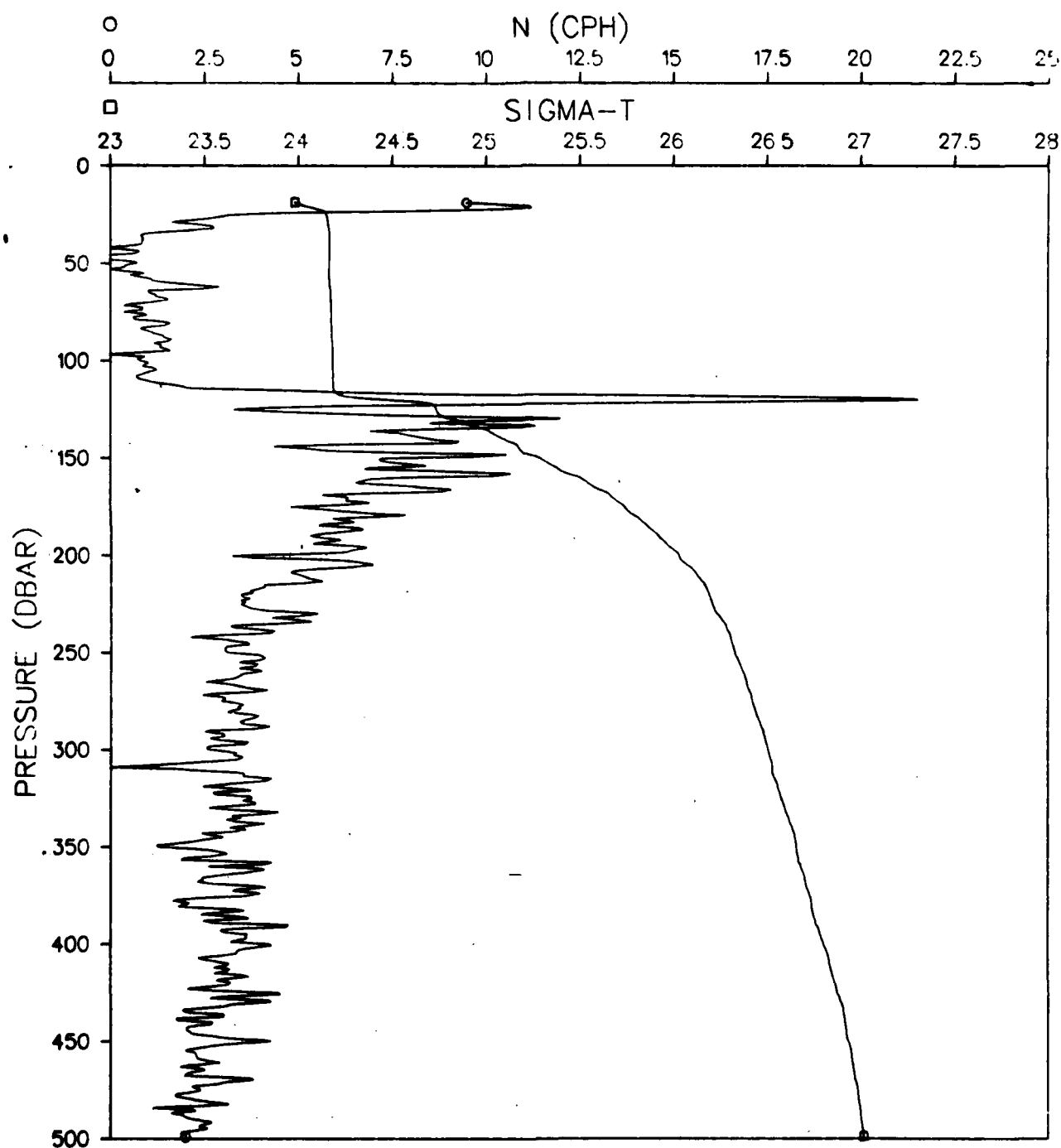


Figure 335.

ATOM 79 DEPLOYMENT
STATION 100052

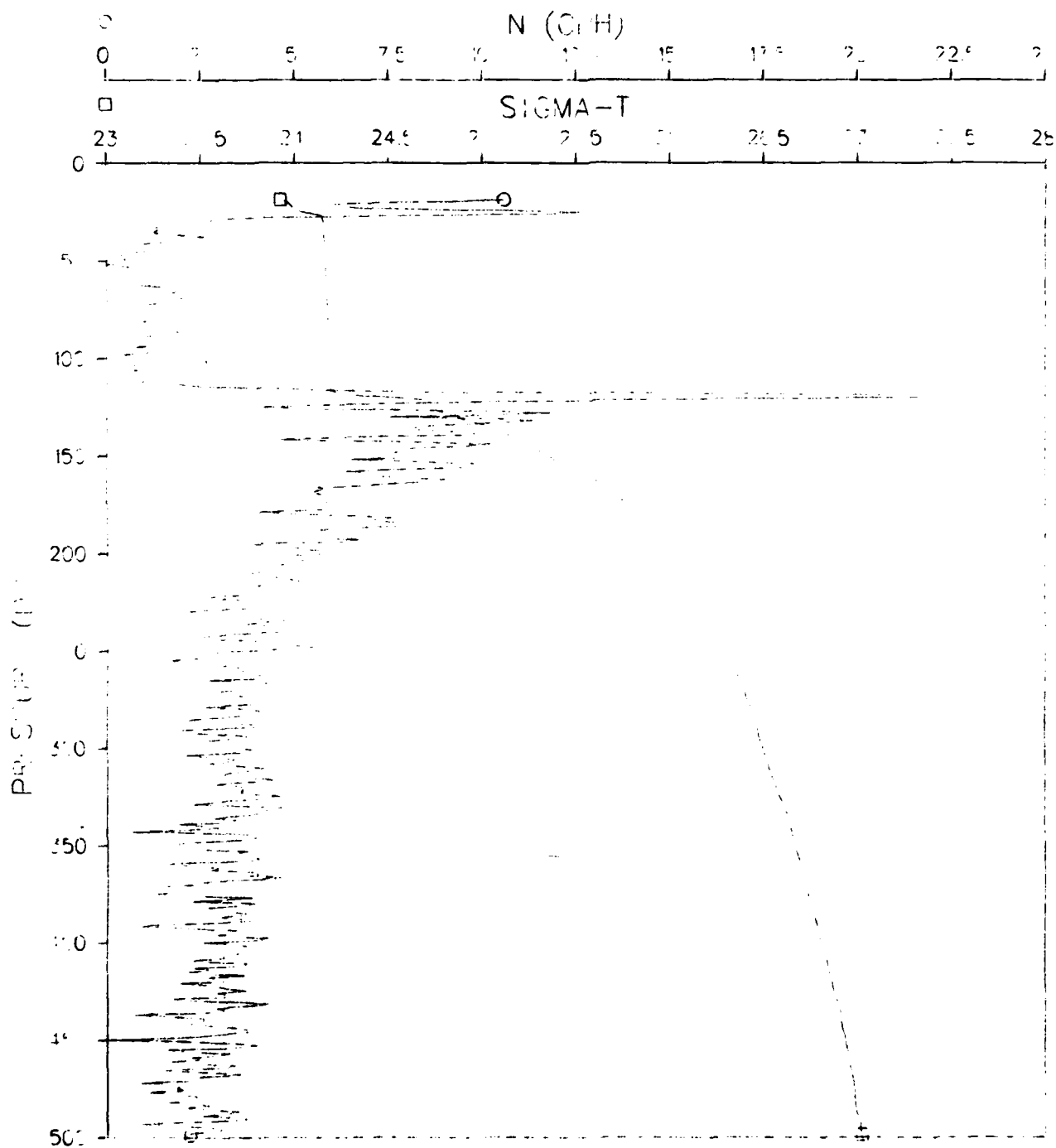


Figure 336.

ATOM 79 DEPLOYMENT
STATION 100033

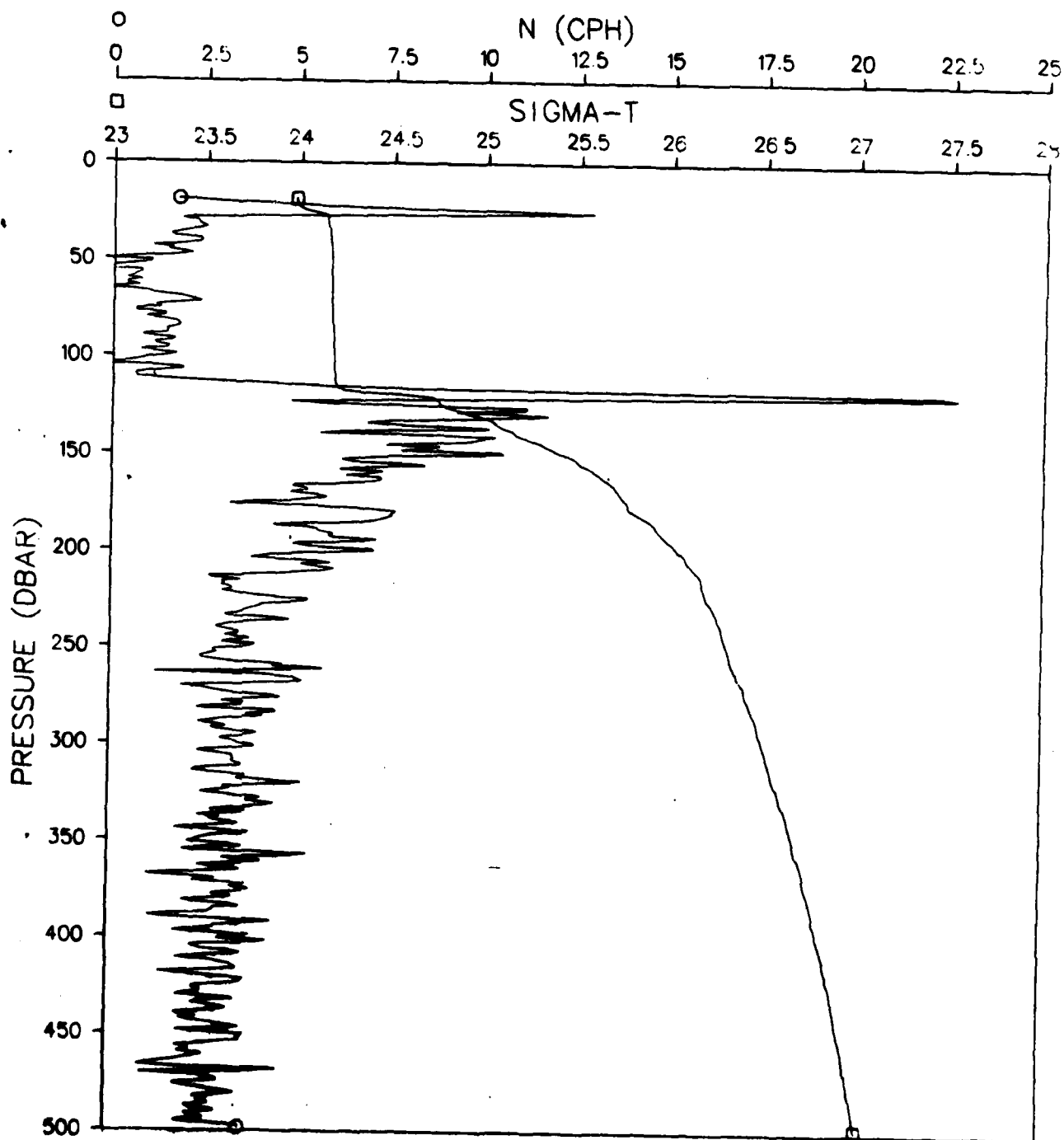


Figure 337.

ATOM 79 DEPLOYMENT STATION 100034

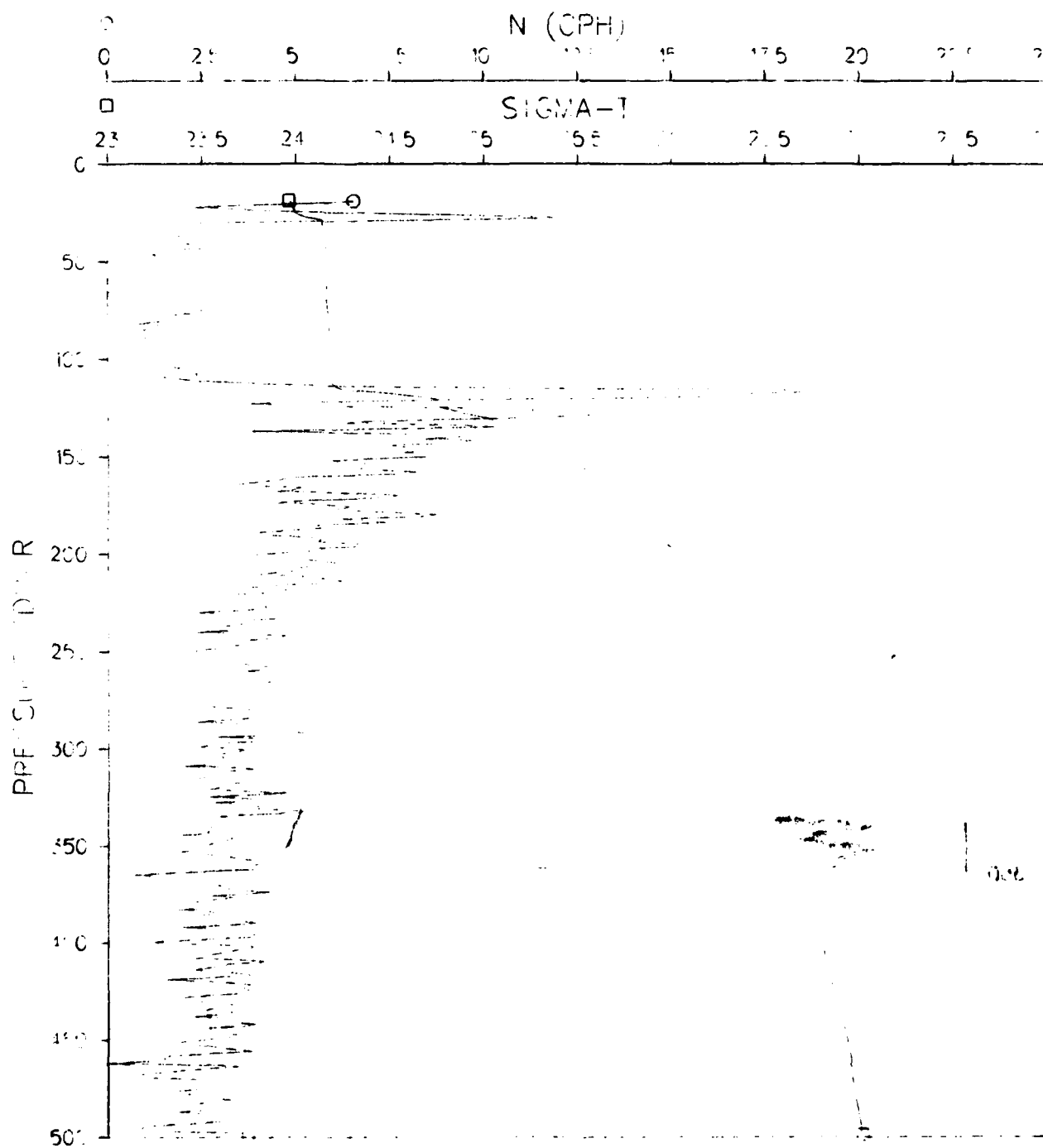


Figure 338.

ATOM 79 DEPLOYMENT
STATION 100001

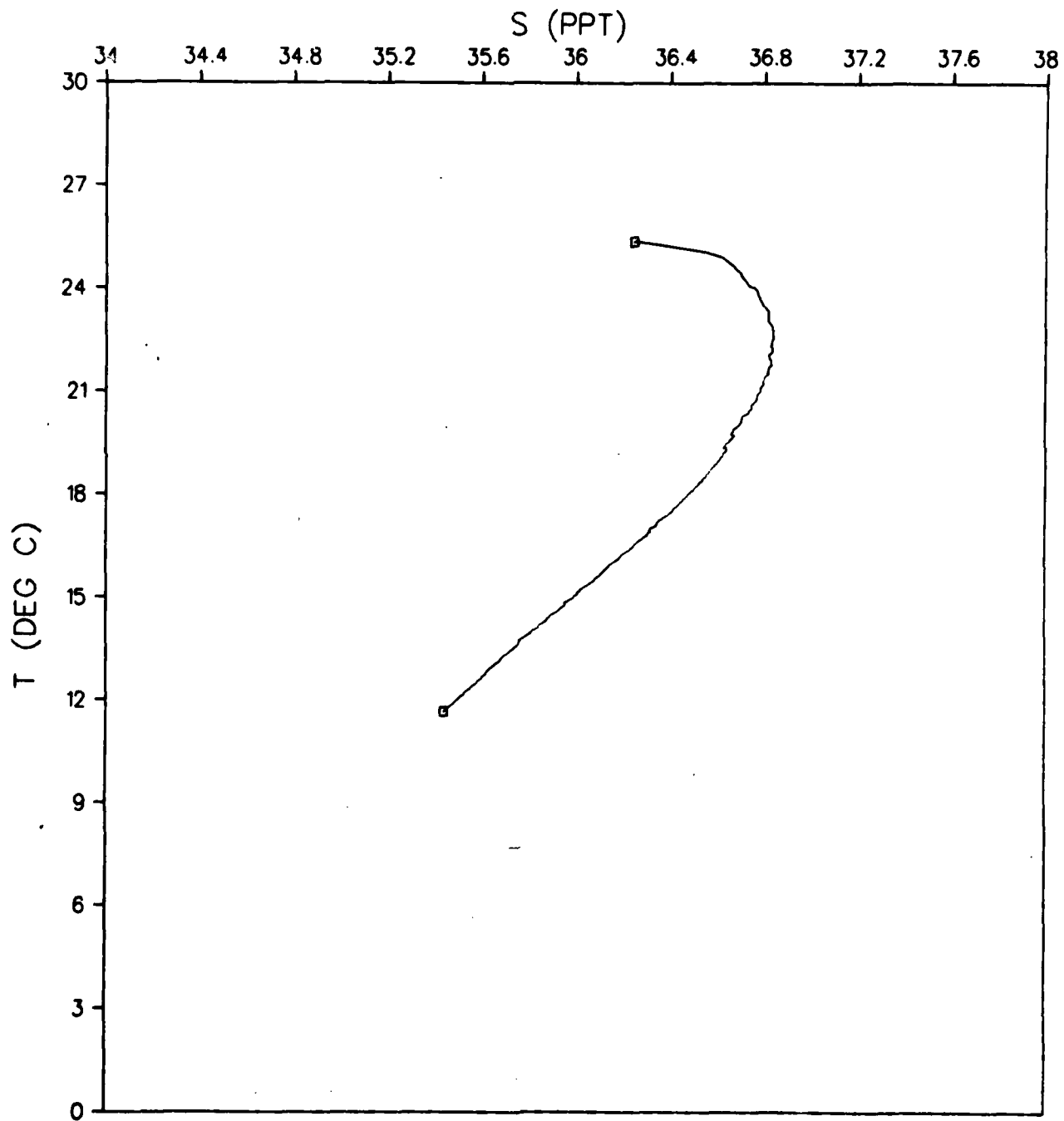


Figure 339.

ATOM 79 DEPLOYMENT
STATION 100005

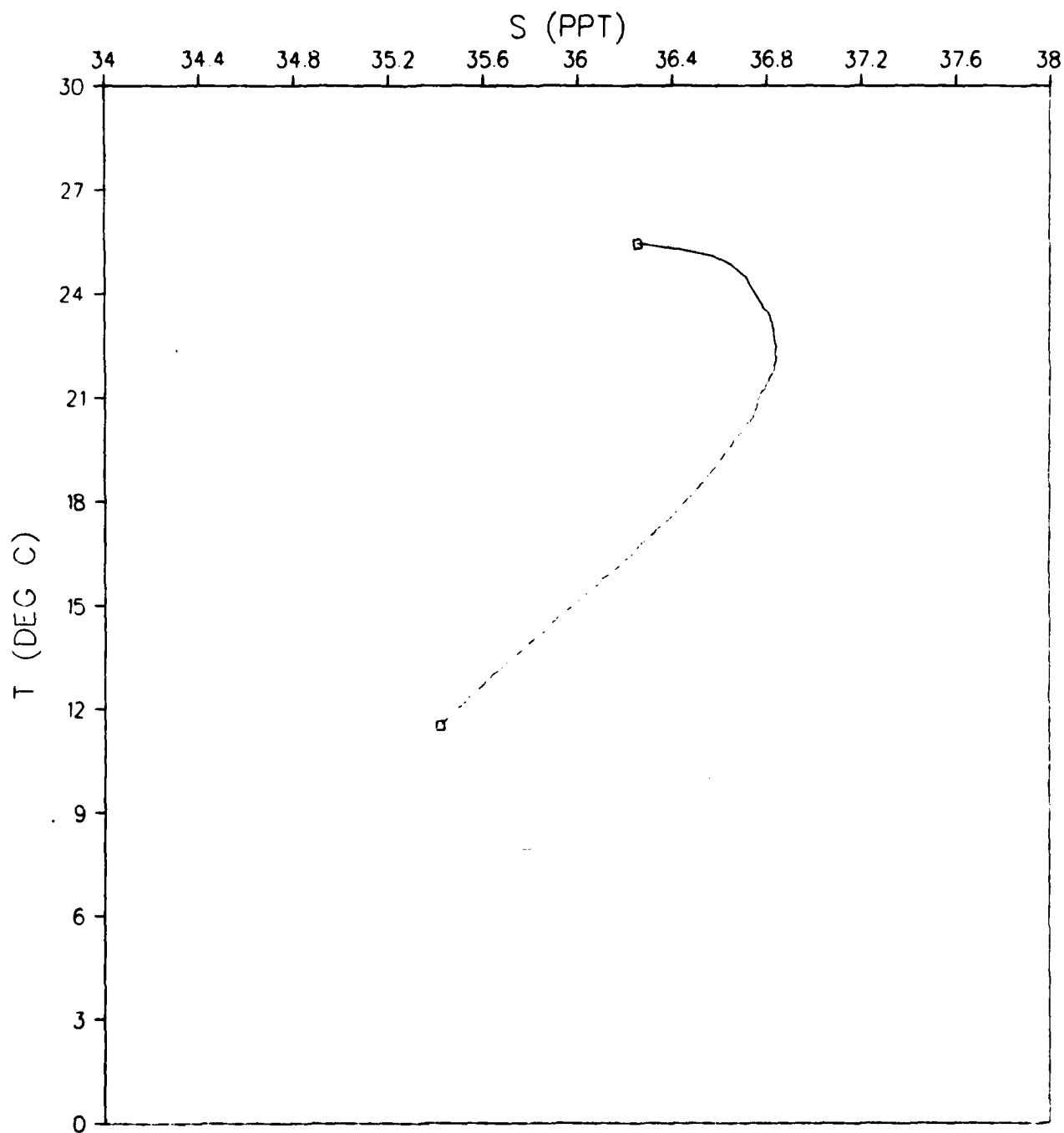


Figure 340.

ATOM 79 DEPLOYMENT
STATION 100006

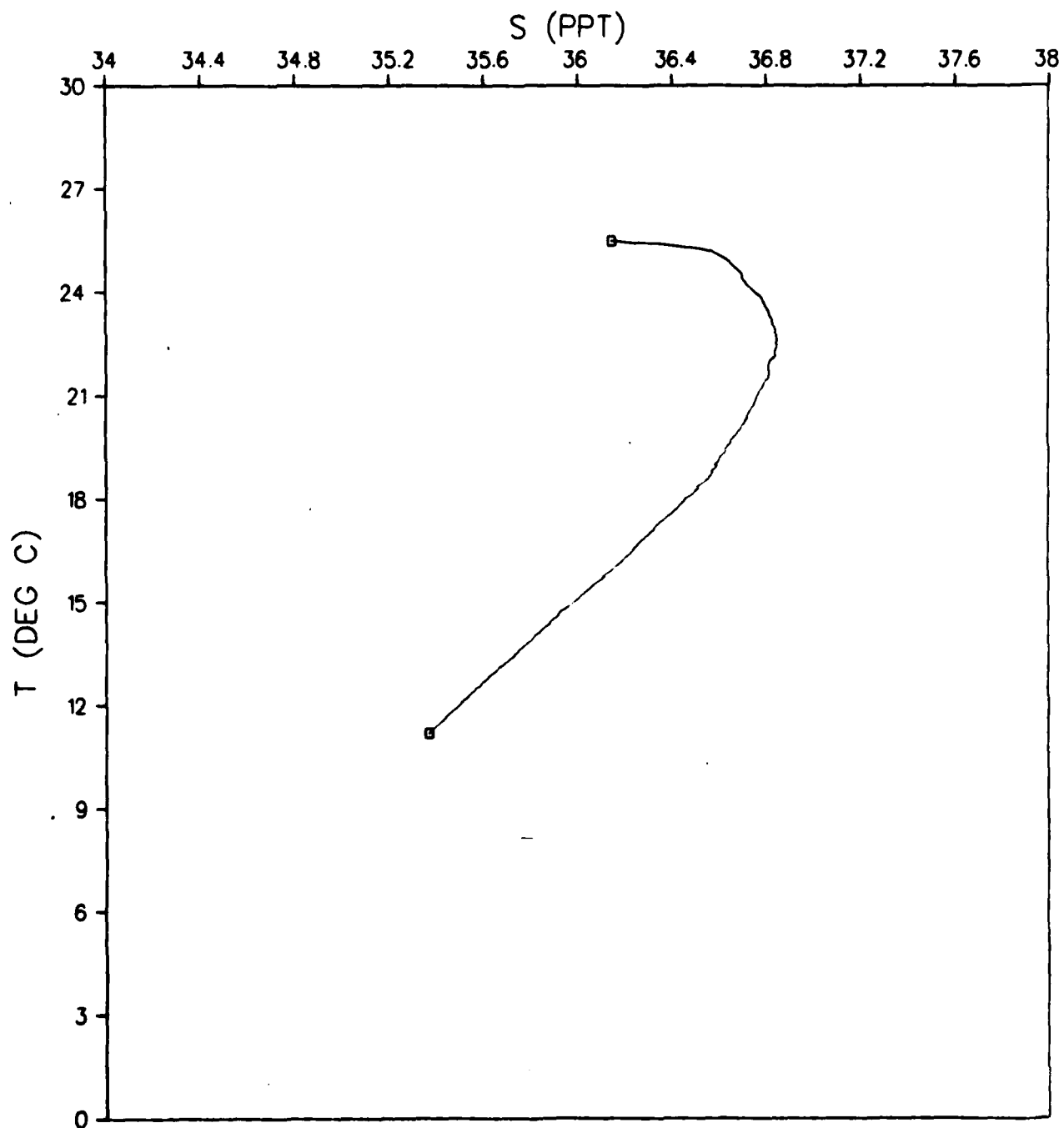


Figure 341.

ATOM 79 DEPLOYMENT
STATION 100007

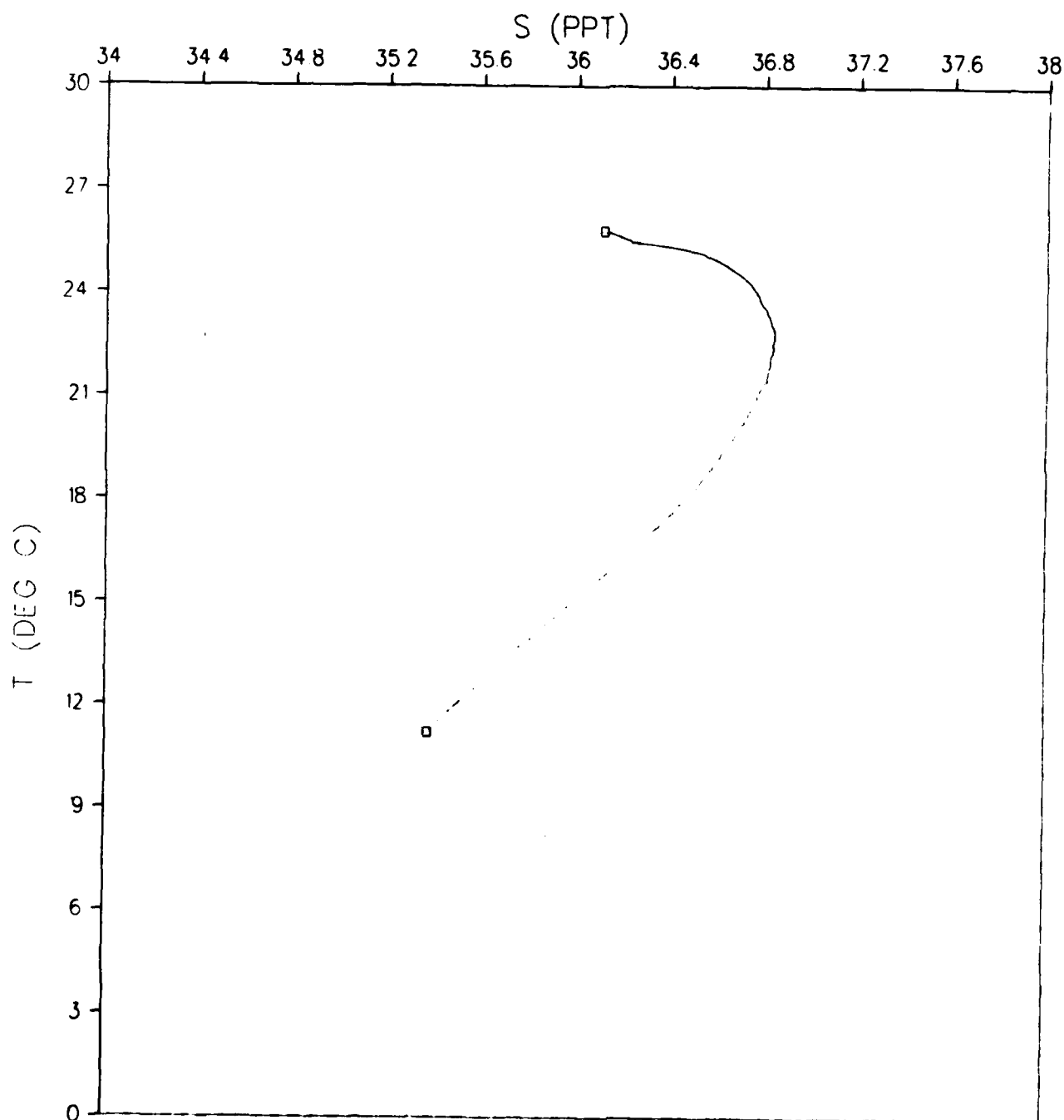


Figure 342.

ATOM 79 DEPLOYMENT
STATION 100008

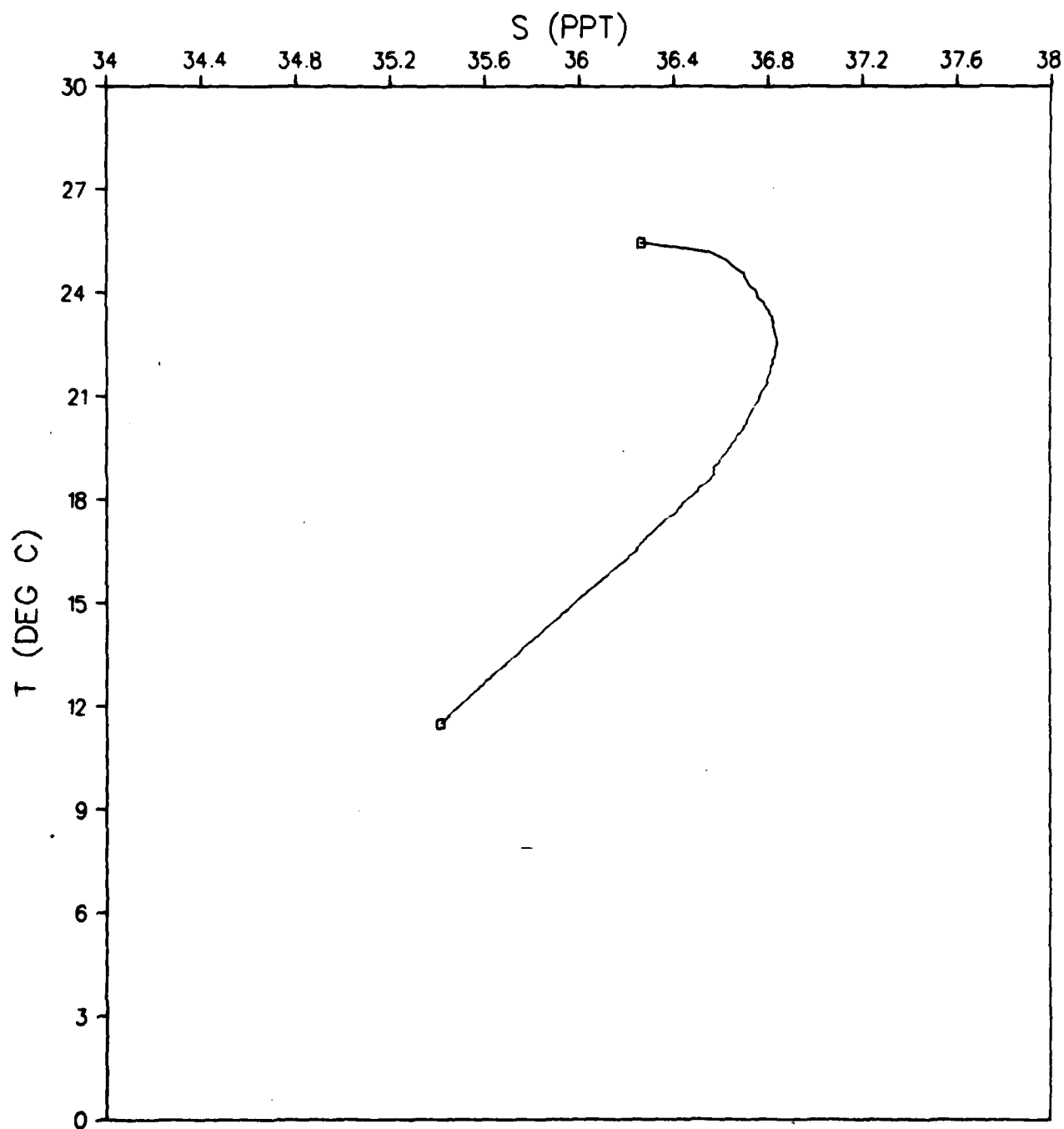


Figure 343.

ATOM 79 DEPLOYMENT STATION 100009

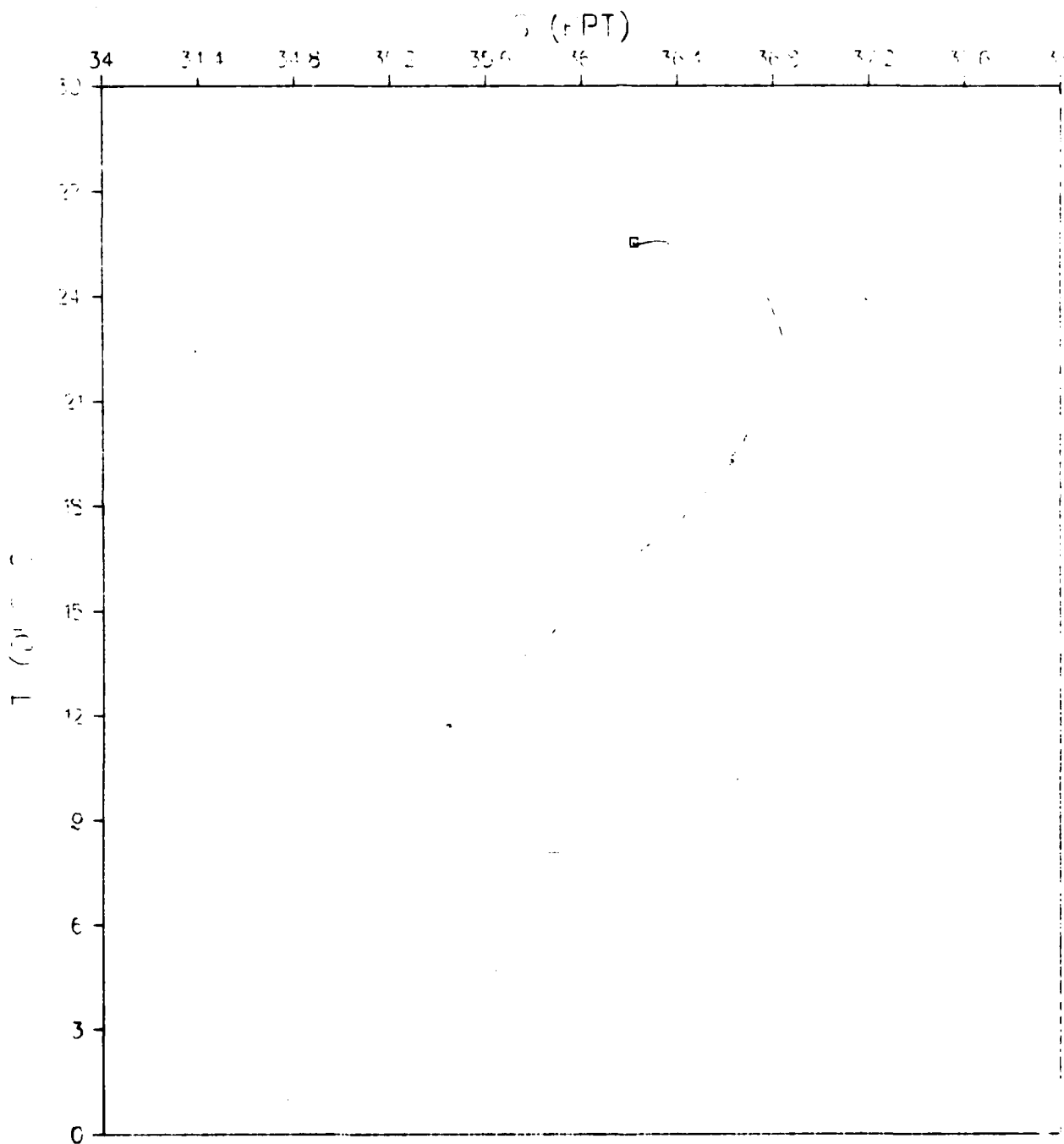


Figure 344.

ATOM 79 DEPLOYMENT
STATION 100010

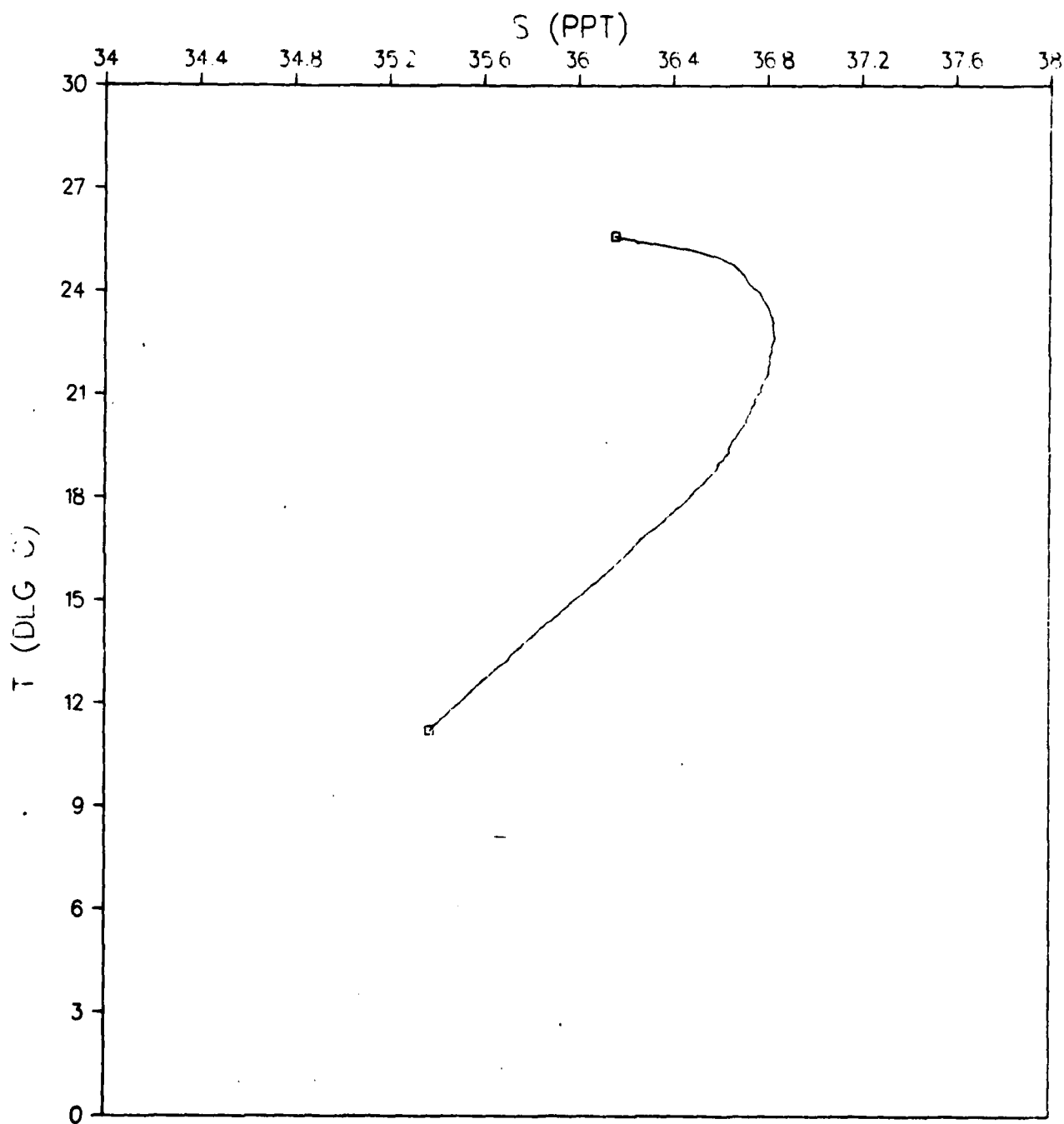


Figure 345.

ATOM 79 DEPLOYMENT STATION 100011

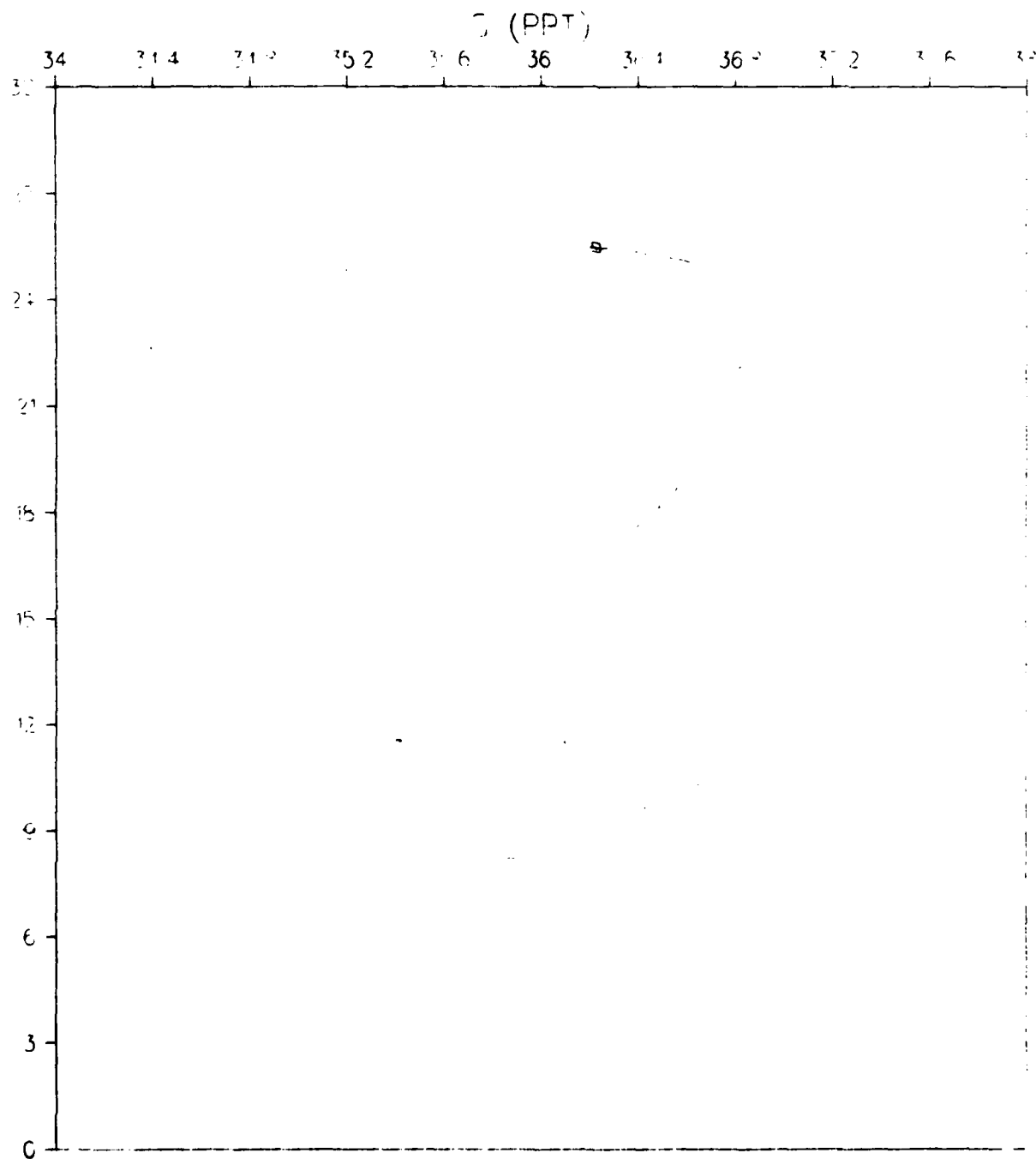


Figure 346.

ATOM 79 DEPLOYMENT
STATION 100012

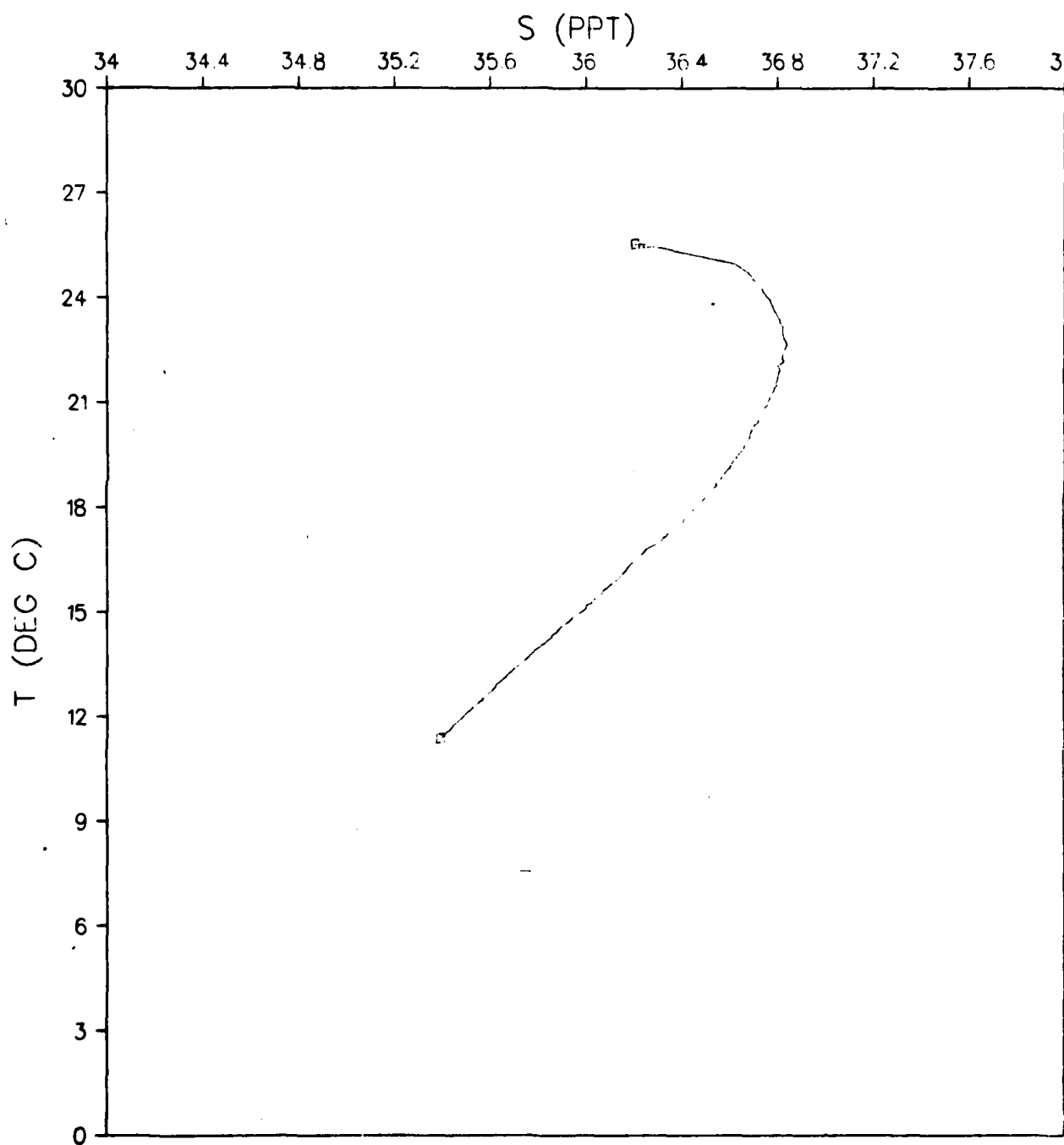


Figure 347.

ATOM 79 DEPLOYMENT
STATION 100013

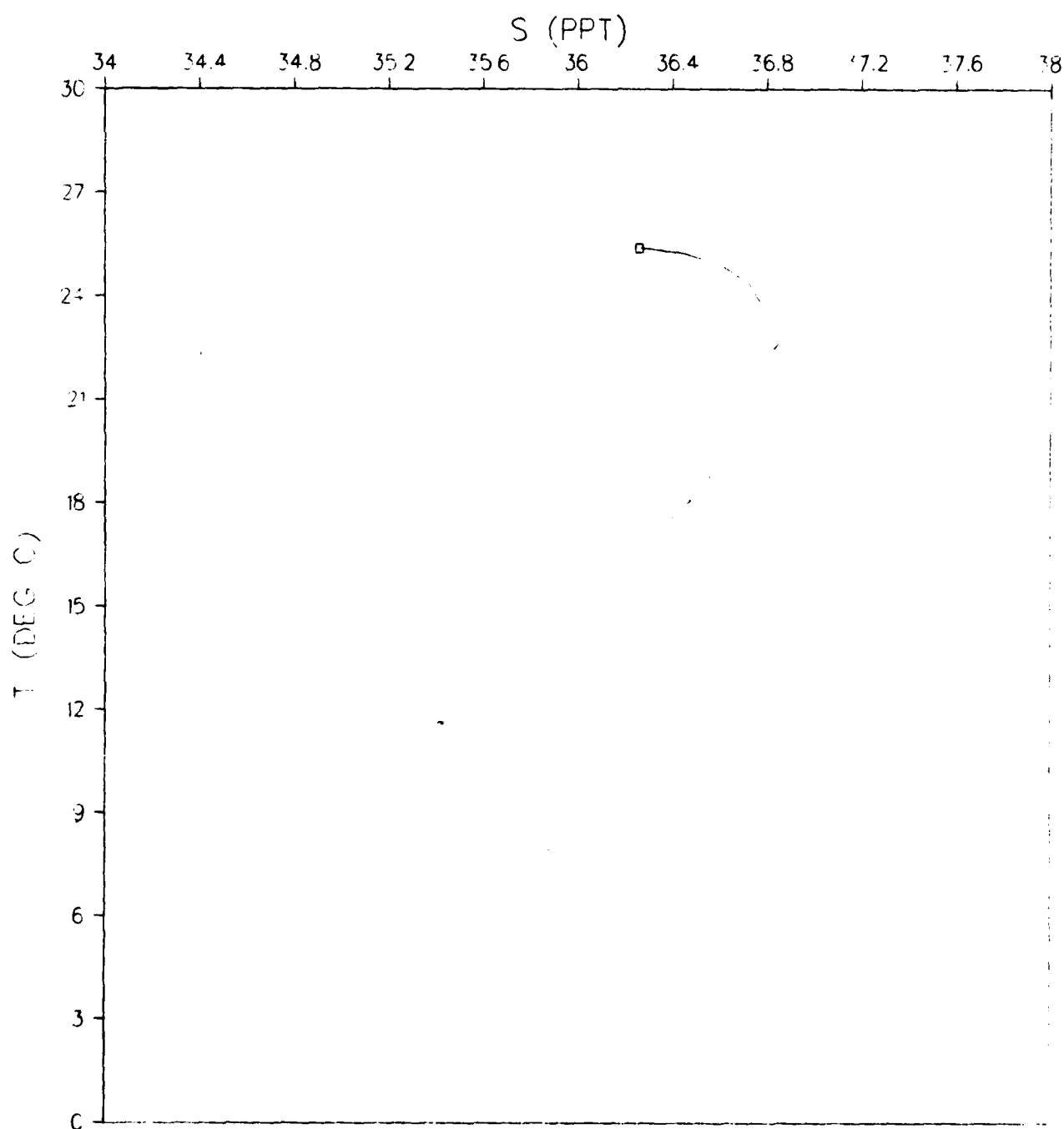


Figure 348.

ATOM 79 DEPLOYMENT
STATION 100014

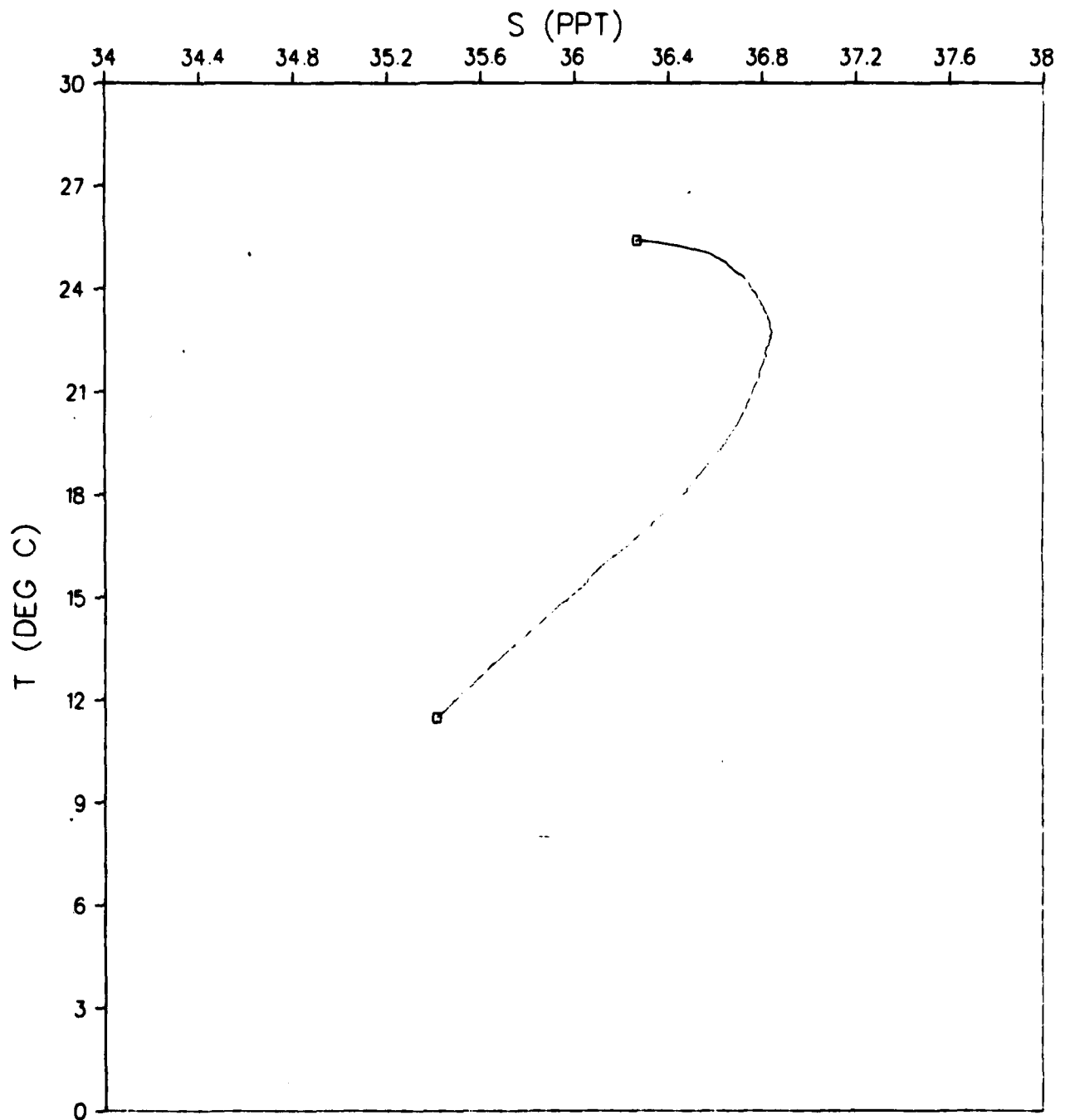


Figure 349.

ATOM 79 DEPLOYMENT
STATION 100015

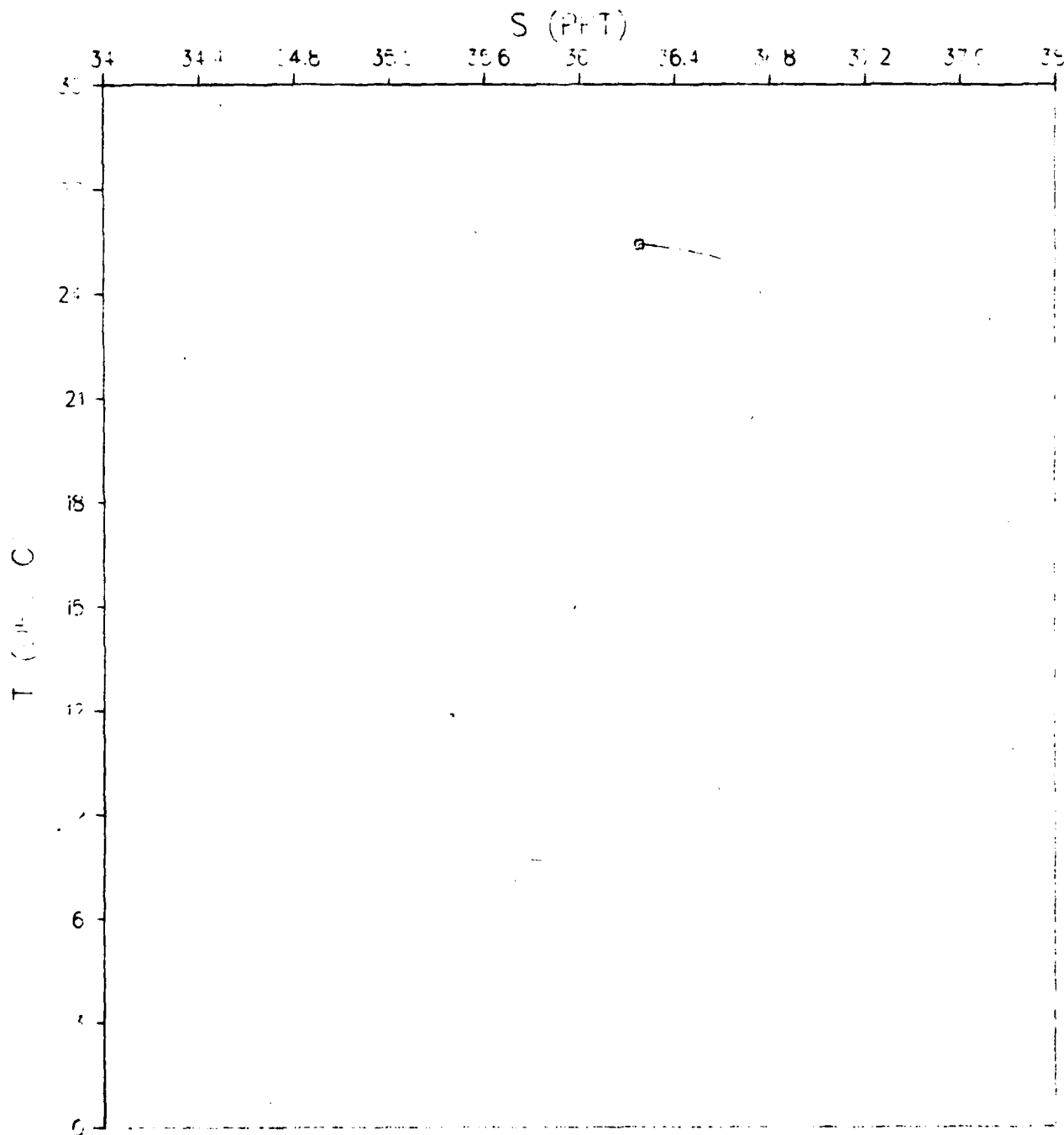


Figure 350.

ATOM 79 DEPLOYMENT
STATION 100016

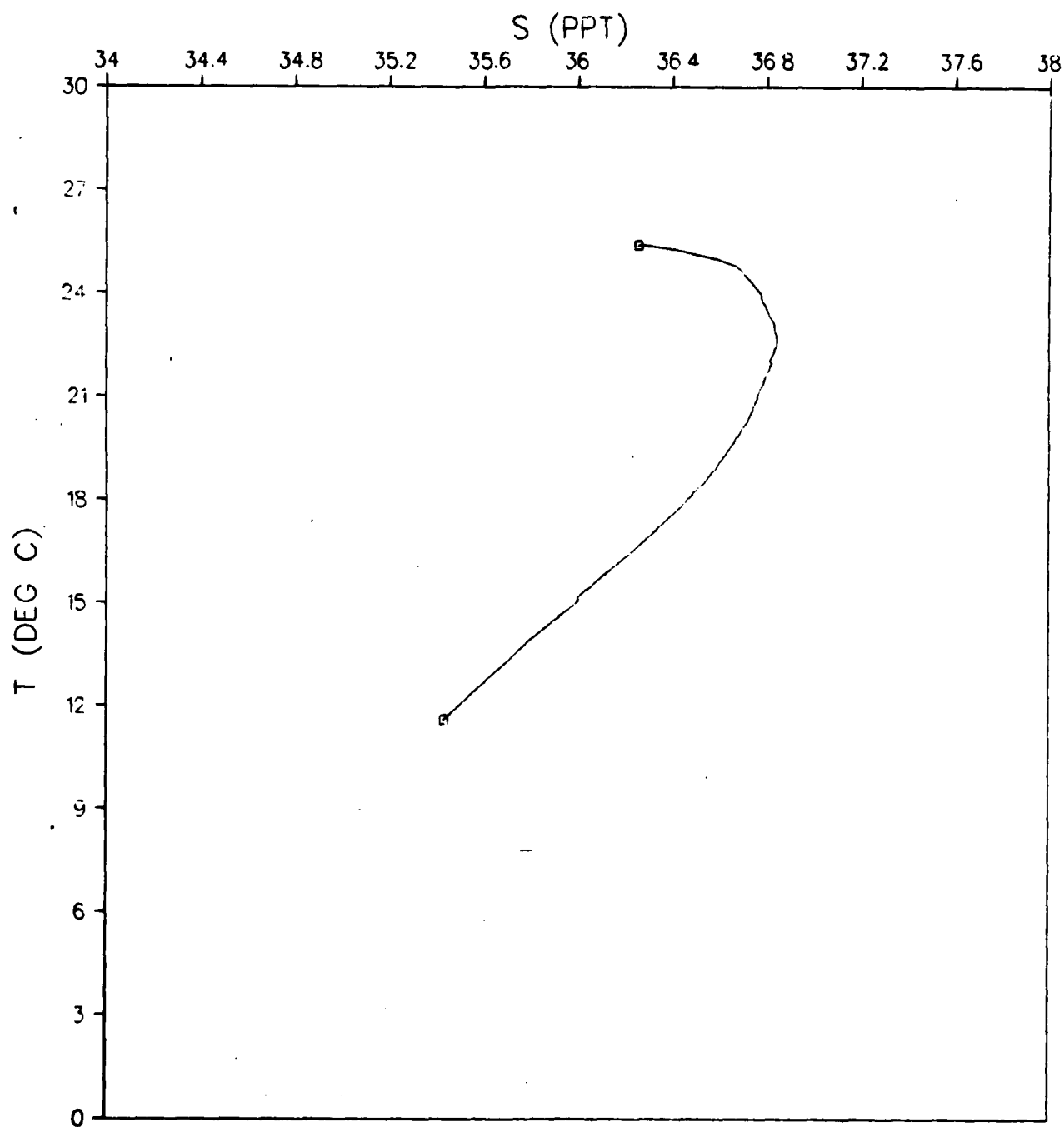


Figure 351.

ATOM 79 DEPLOYMENT
STATION 100017

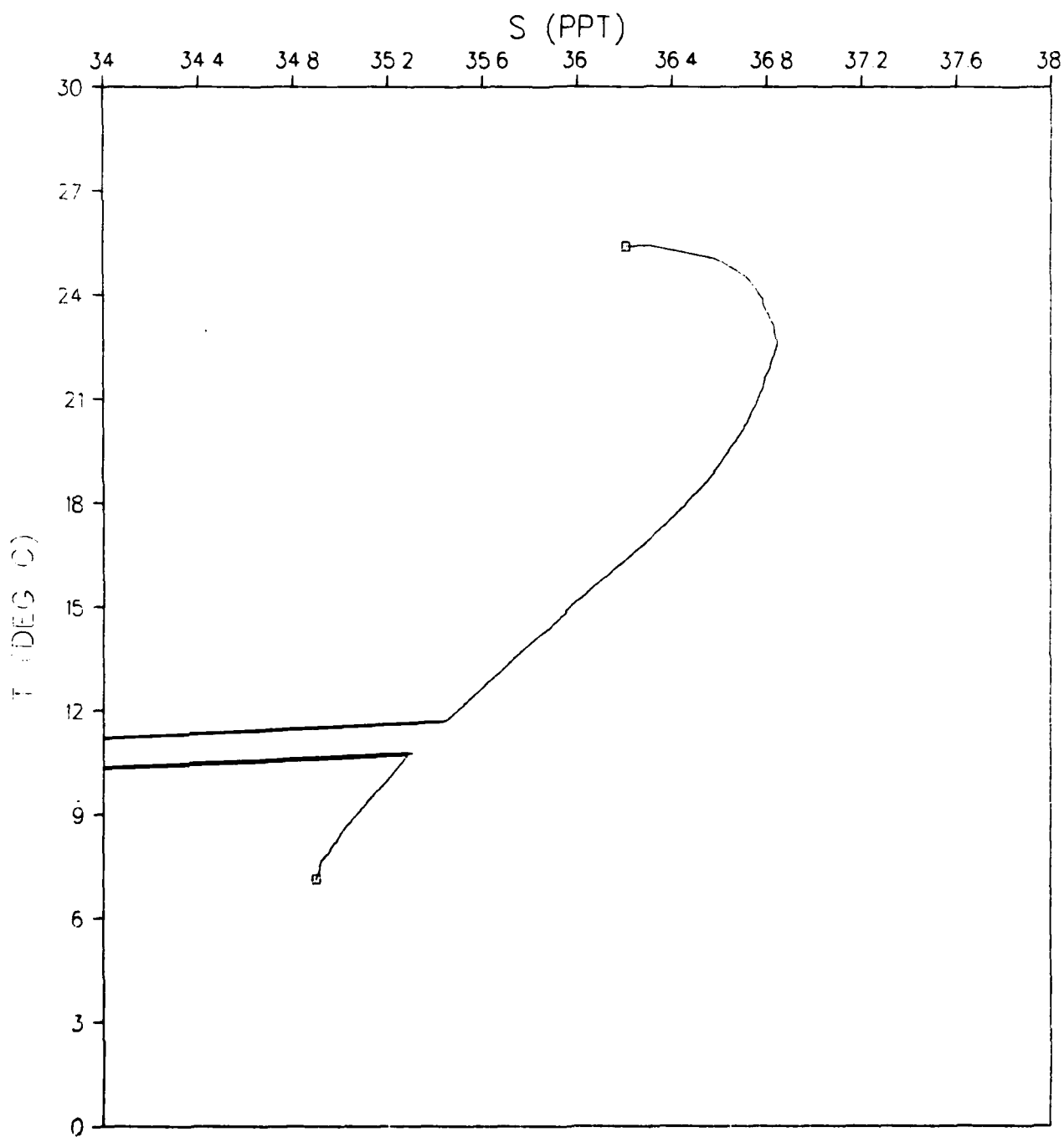


Figure 352.

ATOM 79 DEPLOYMENT
STATION 100018

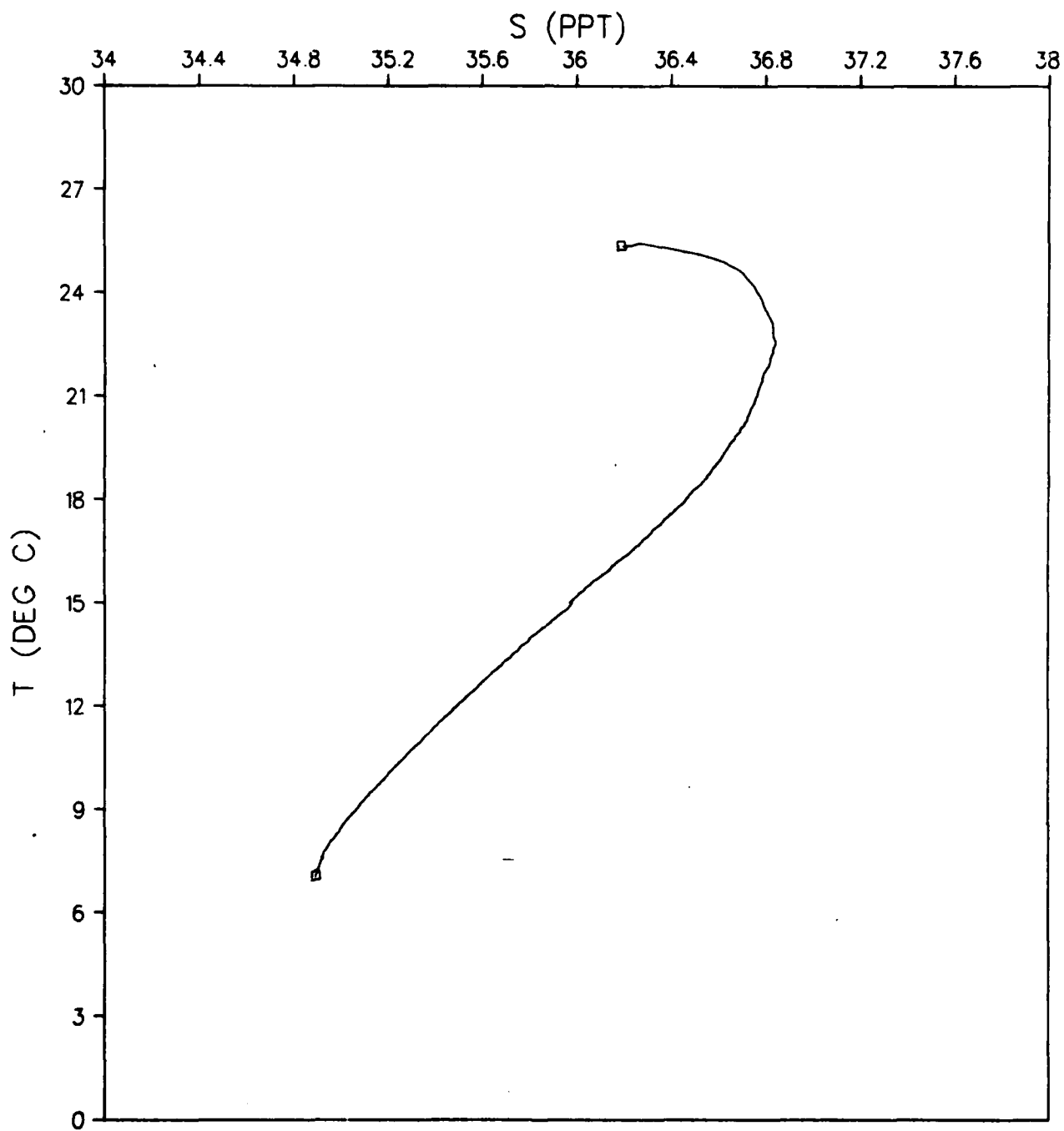


Figure 353.

ATOM 79 DEPLOYMENT
STATION 100019

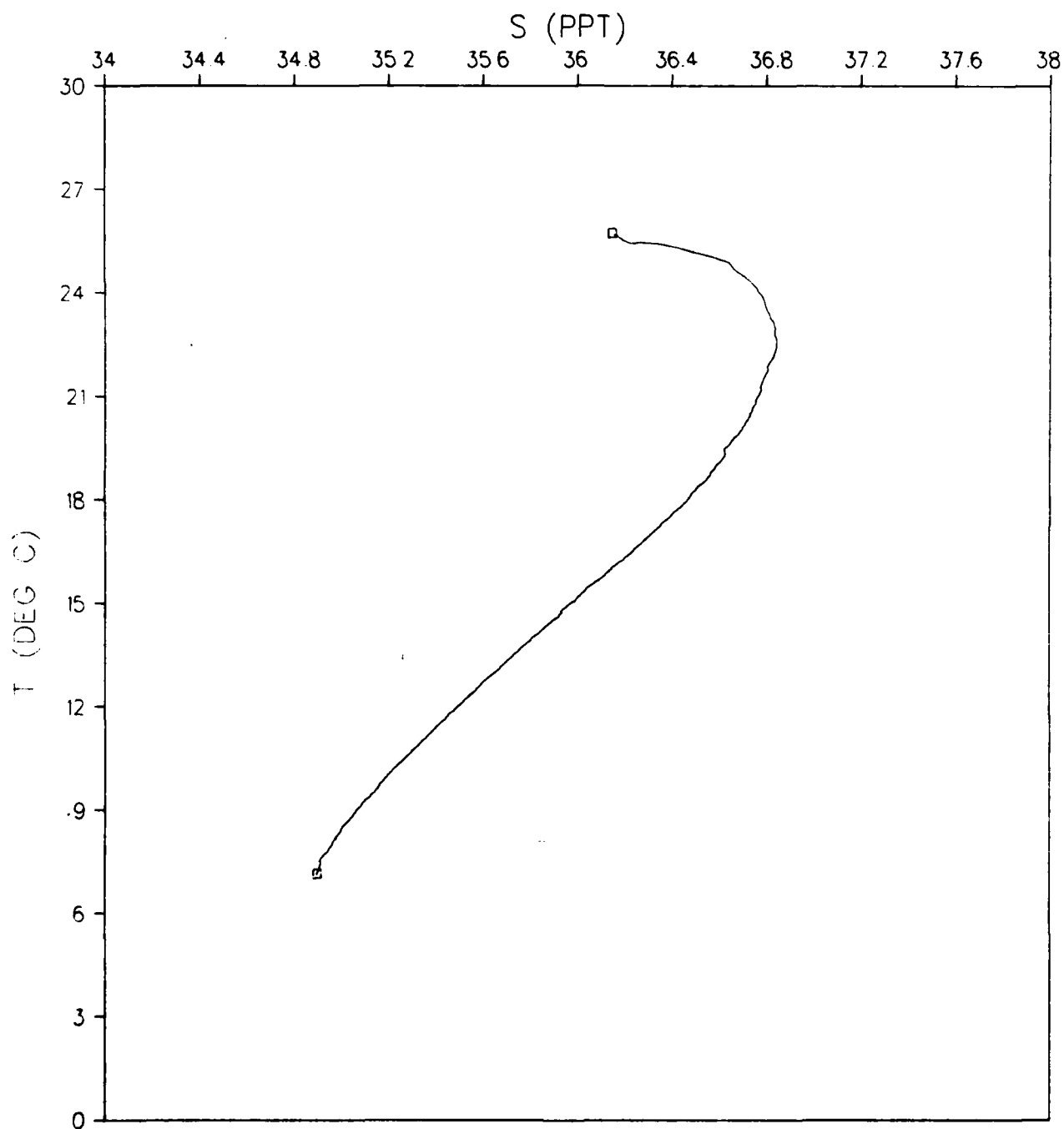


Figure 354.

ATOM 79 DEPLOYMENT
STATION 100020

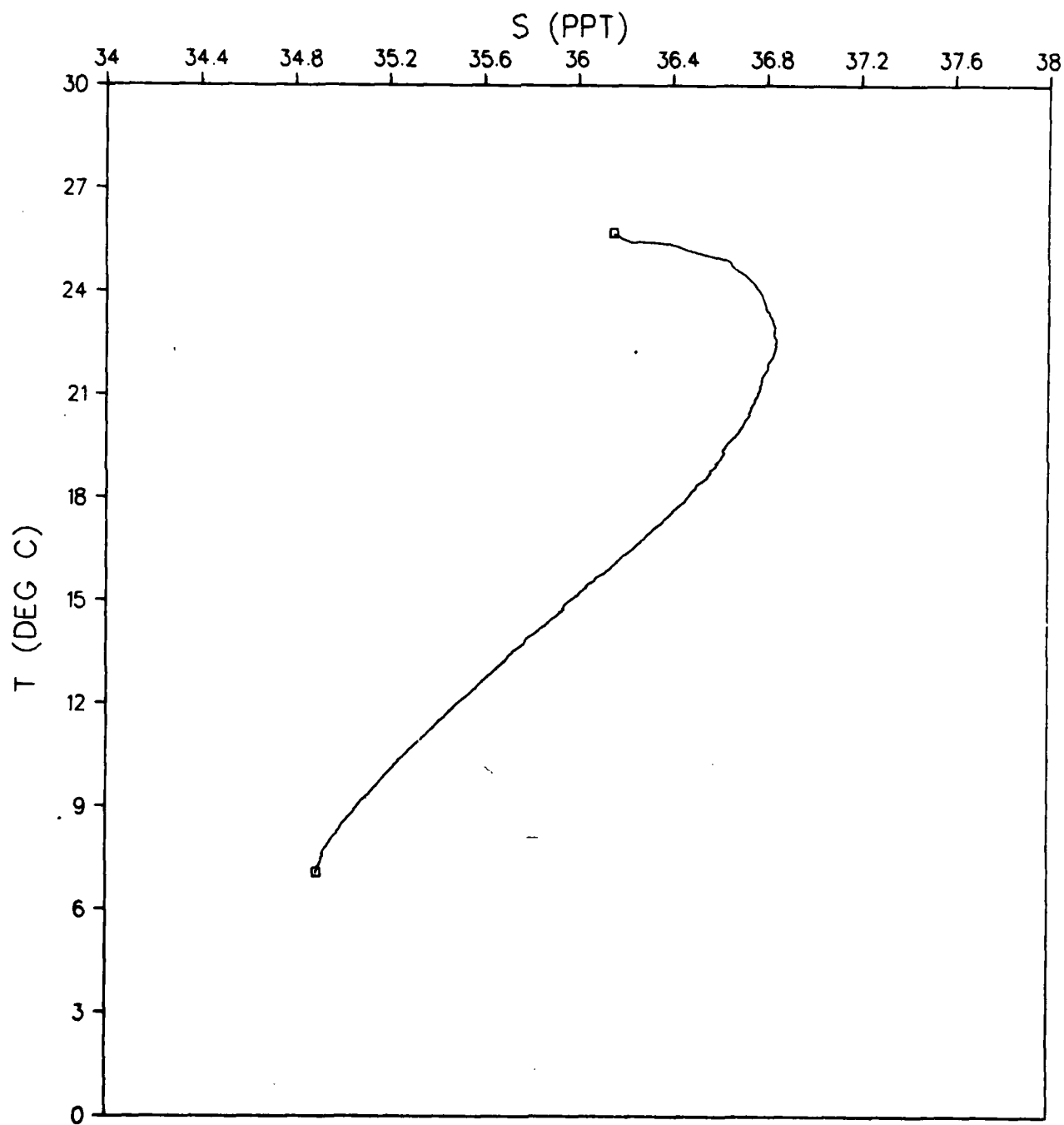


Figure 355.

ATOM 79 DEPLOYMENT
STATION 100021

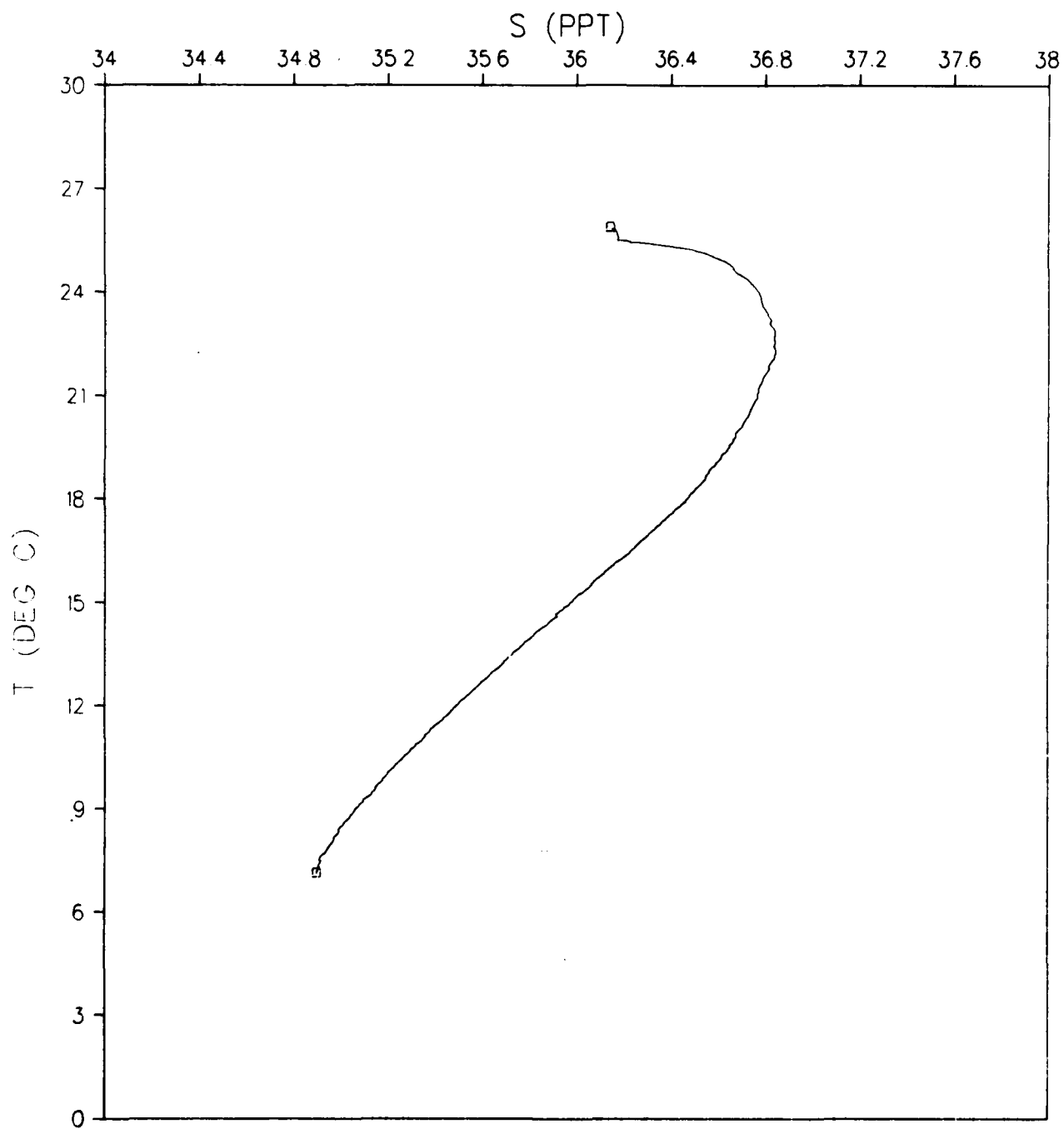


Figure 356.

ATOM 79 DEPLOYMENT
STATION 100022

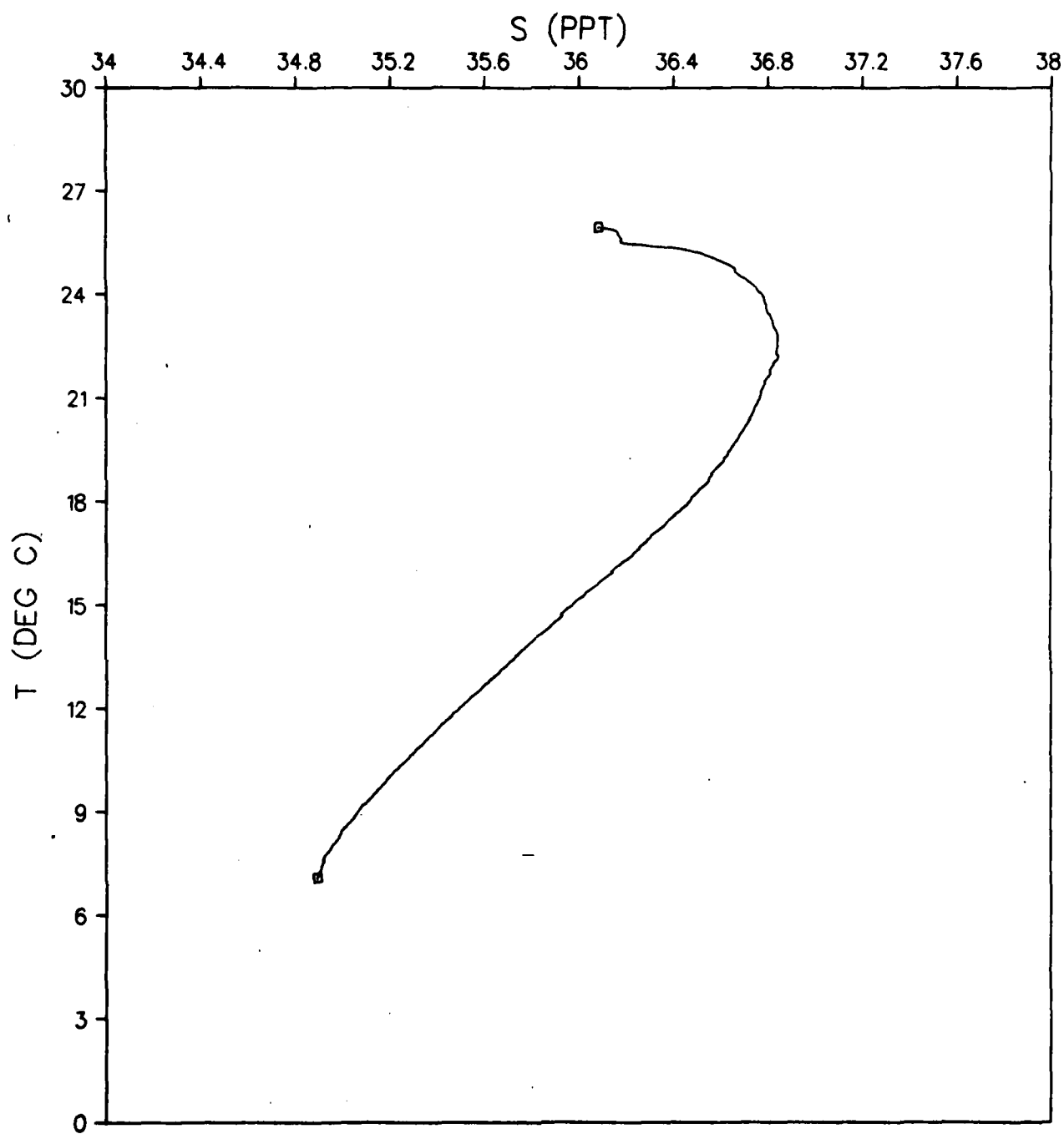


Figure 357.

ATOM 79 DEPLOYMENT
STATION 100023

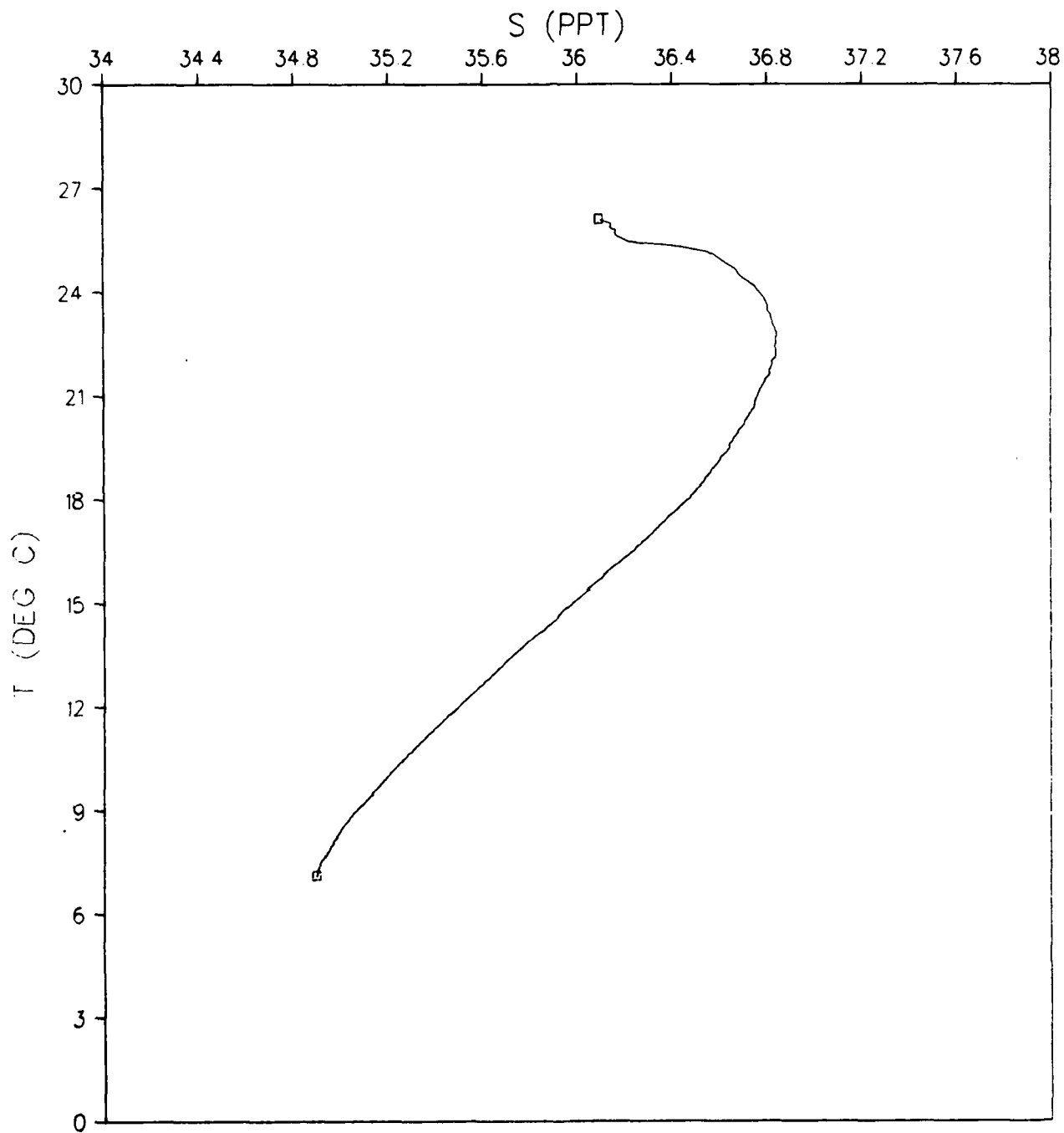


Figure 358.

ATOM 79 DEPLOYMENT
STATION 100024

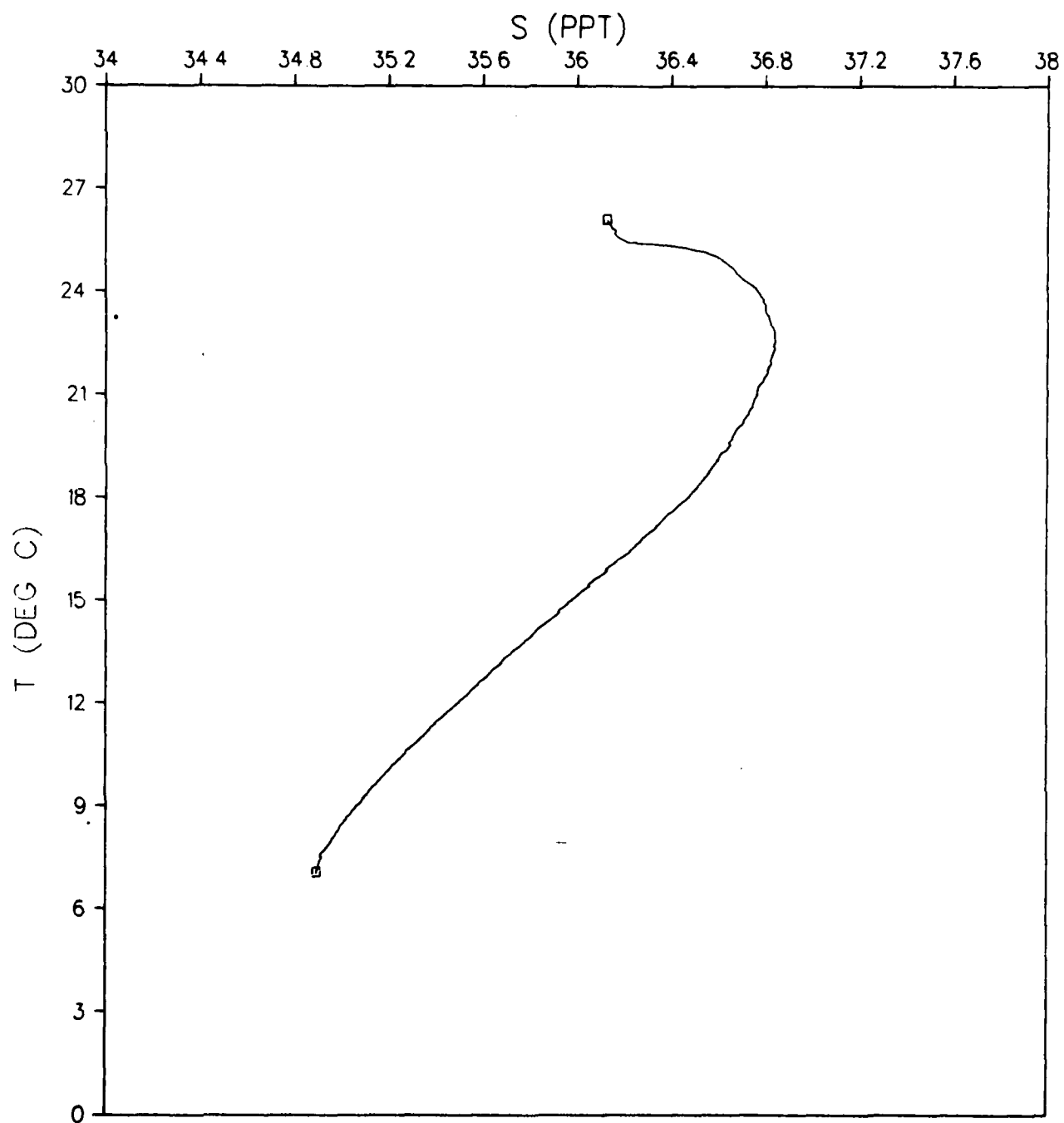


Figure 359.

ATOM 79 DEPLOYMENT
STATION 100028

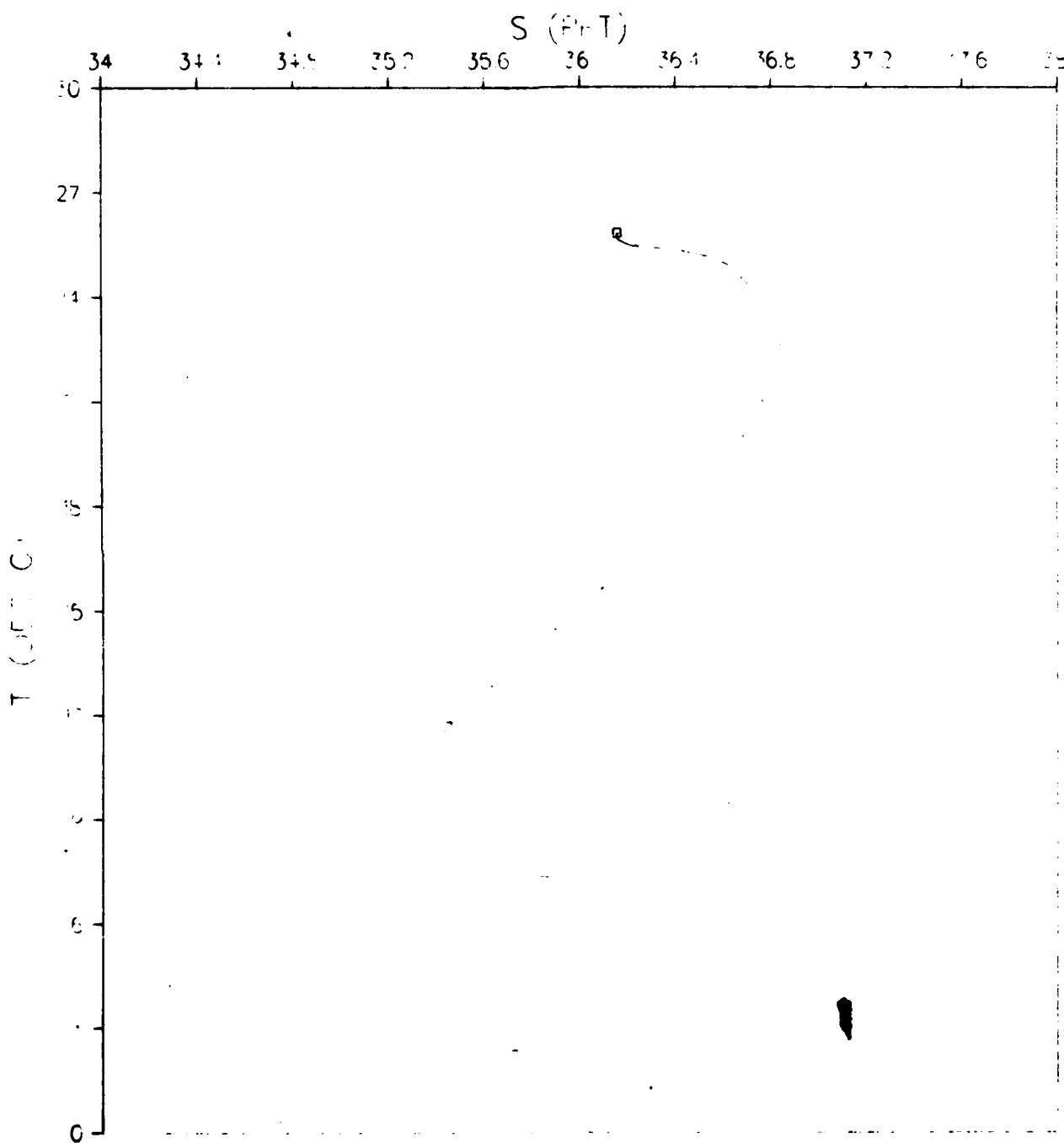


Figure 360.

ATOM 79 DEPLOYMENT
STATION 100026

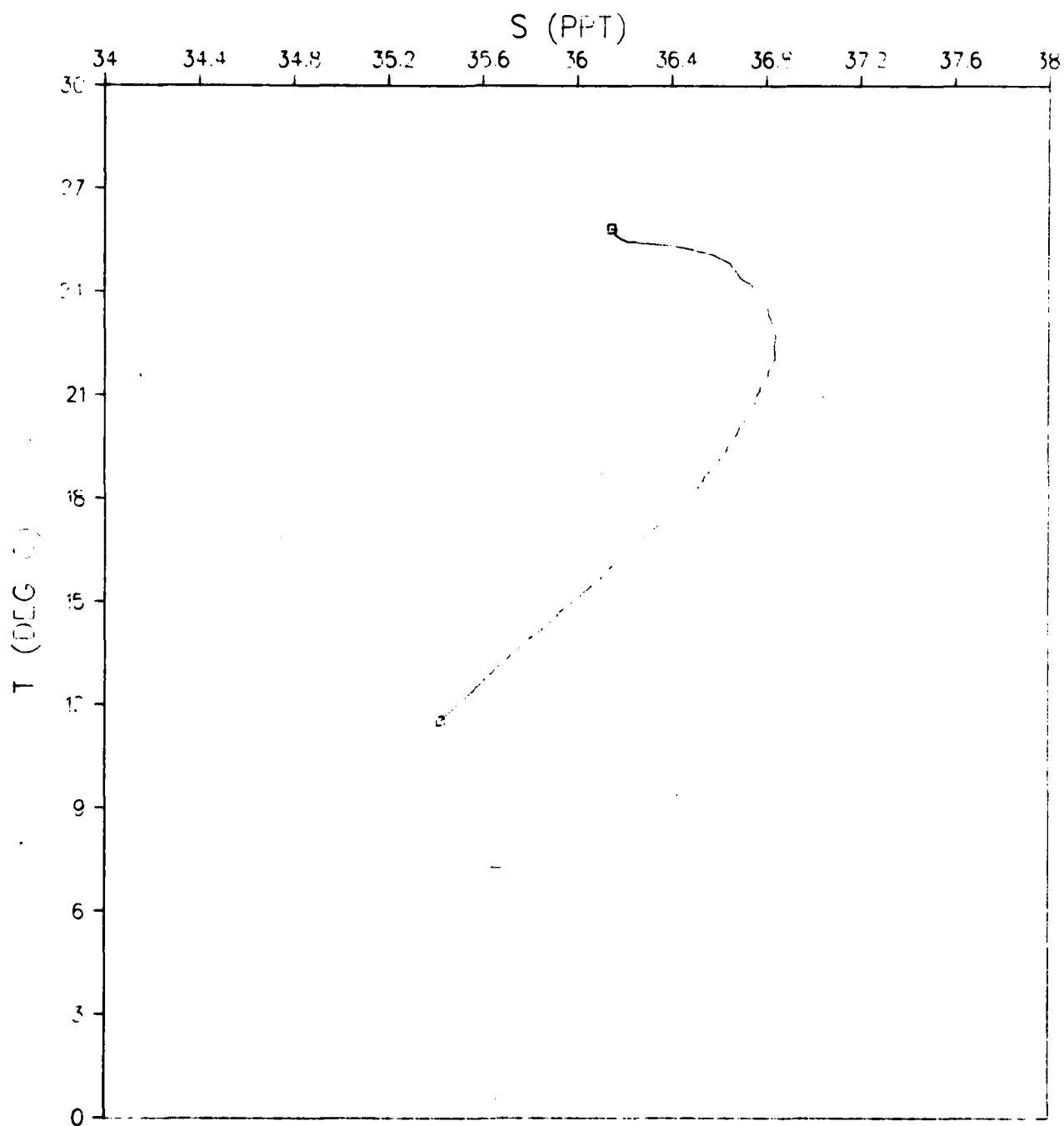


Figure 361.

ATOM 79 DEPLOYMENT STATION 100027

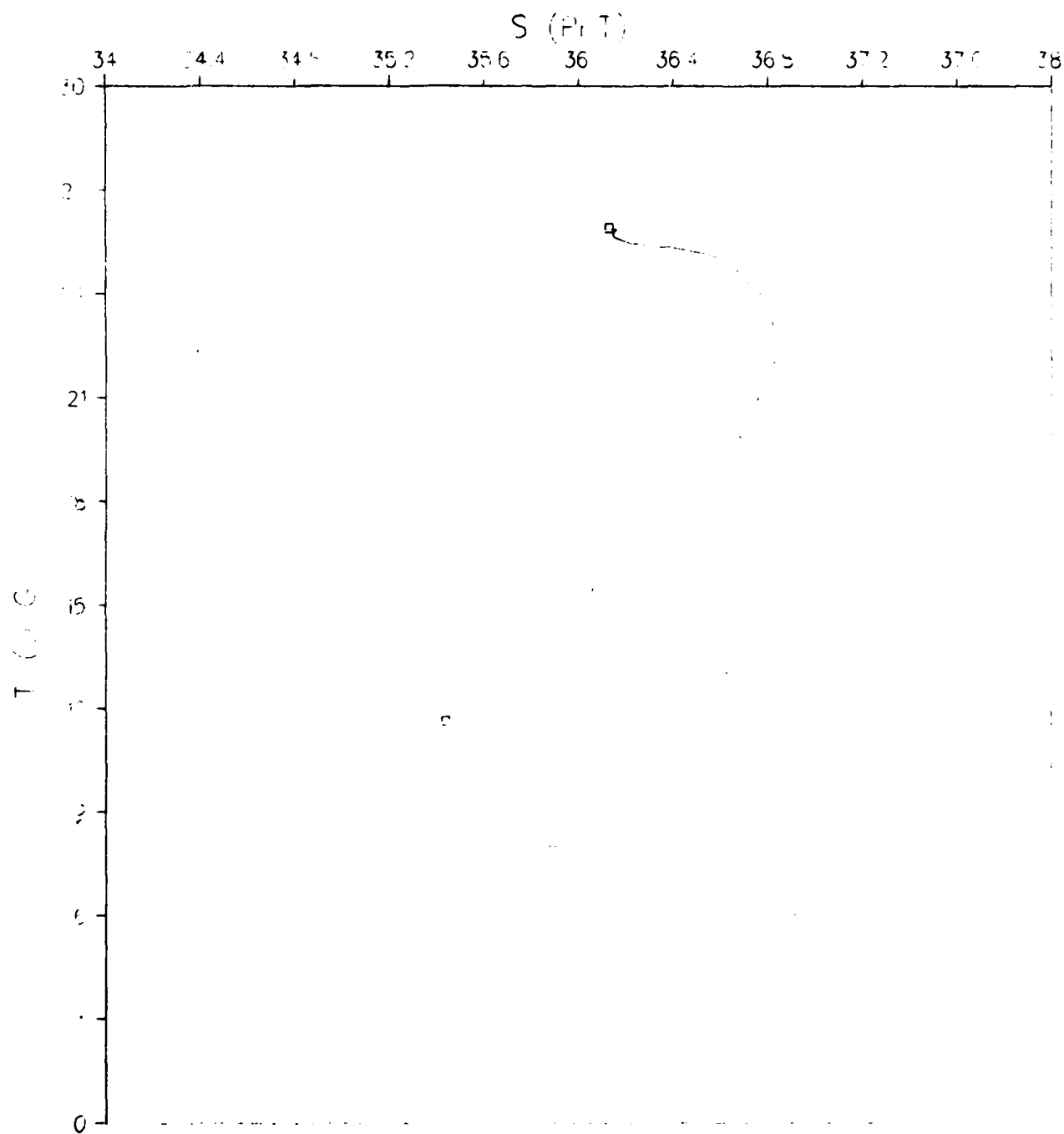
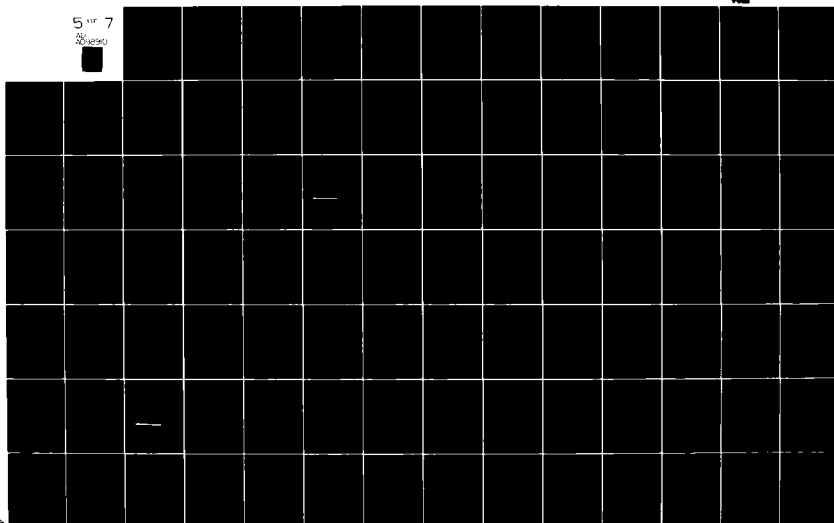


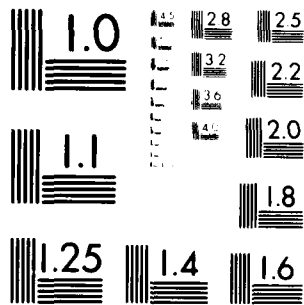
Figure 362.

AD-A098 910 NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC F/8 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TM--ETC
OCT 88 K D SAUNDERS, A W GREEN, M T BERGIN
UNCLASSIFIED NORDA-TN-88

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

ATOM 79 DEPLOYMENT
STATION 100028

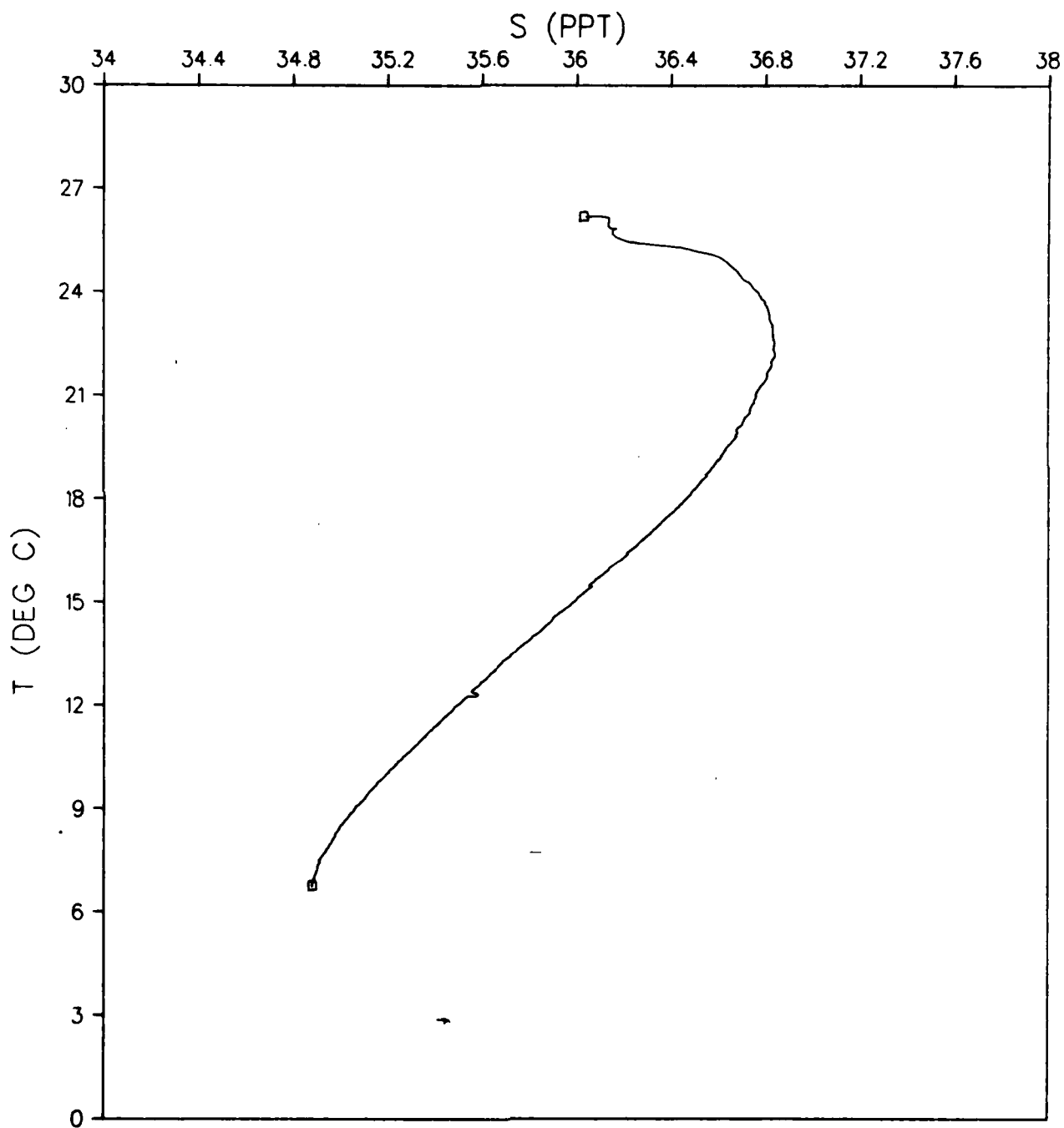


Figure 363.

ATOM 79 DEPLOYMENT STATION 100020

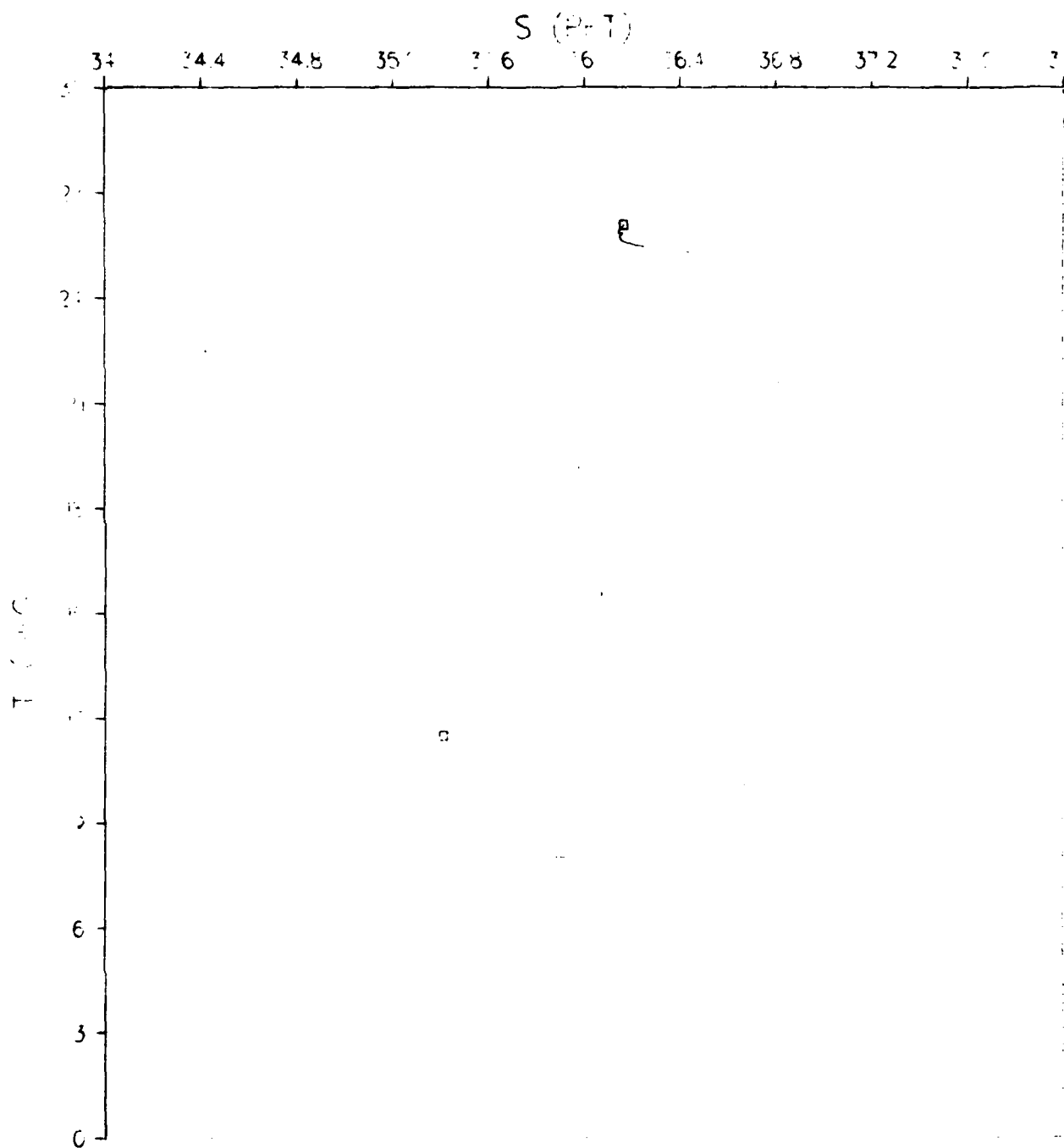


Figure 364.

ATOM 79 DEPLOYMENT
STATION 100030

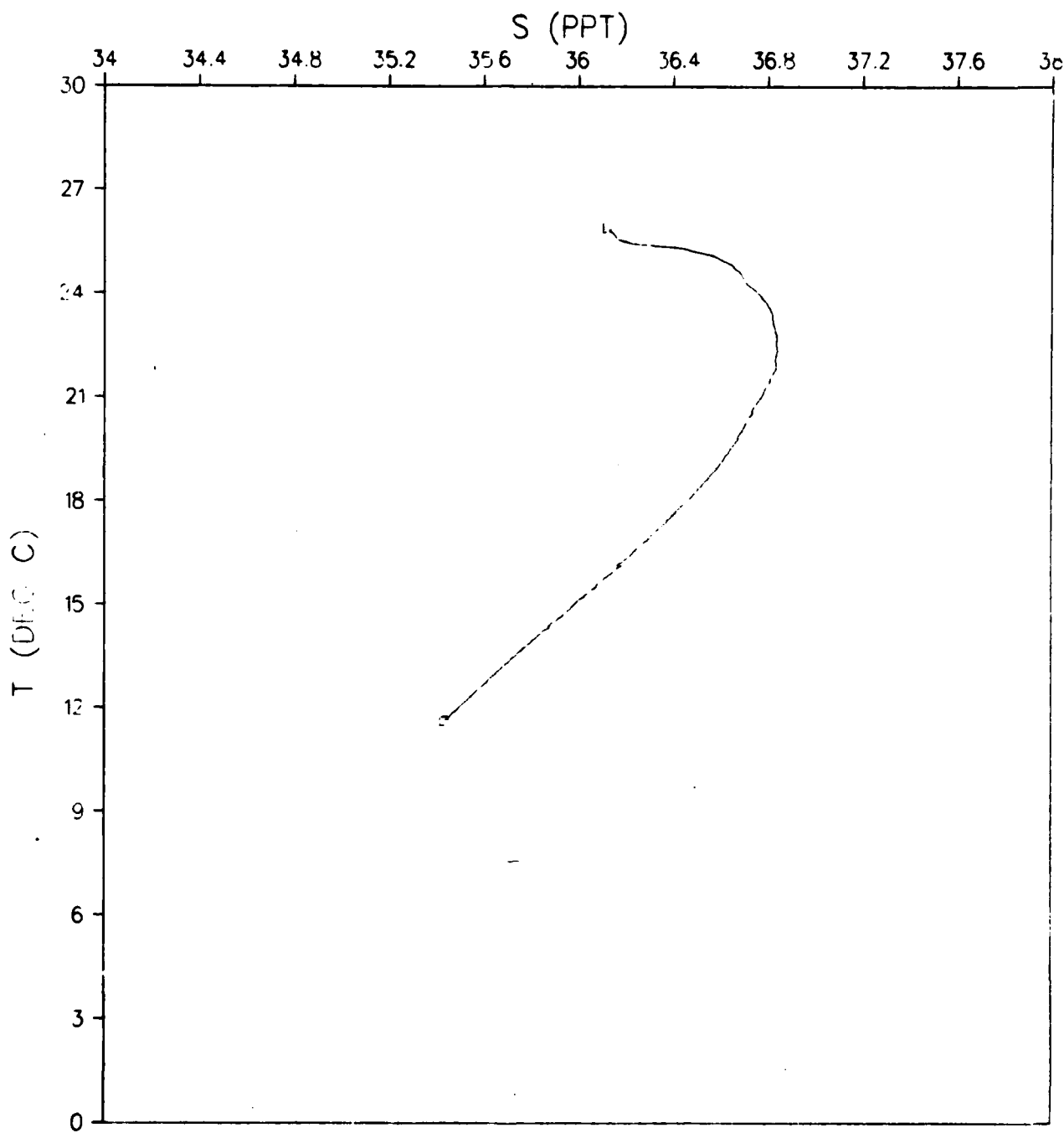


Figure 365.

ATCM 79 DEPLOYMENT
STATION 100051

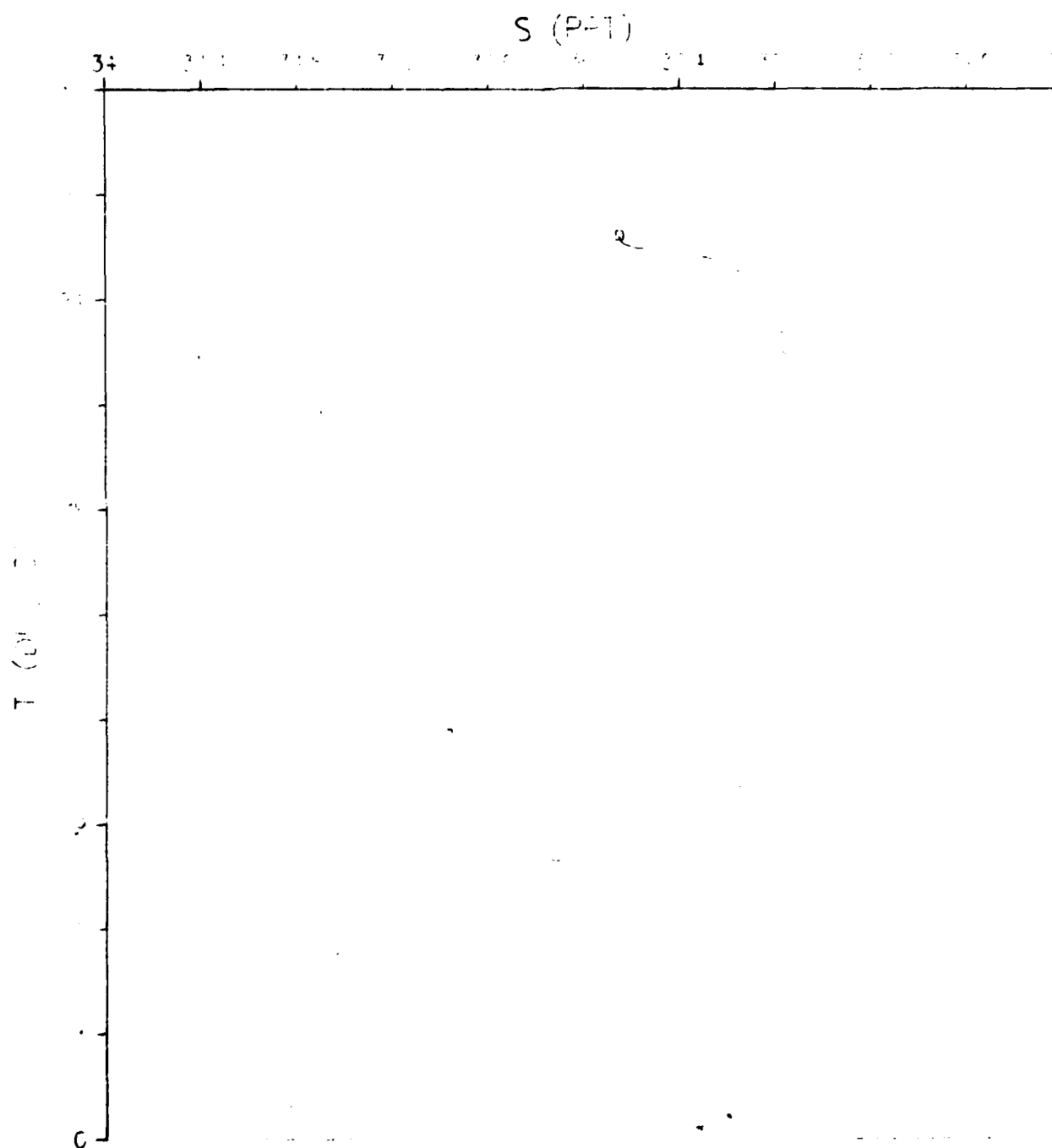


Figure 366.

ATOM 79 DEPLOYMENT
STATION 100032

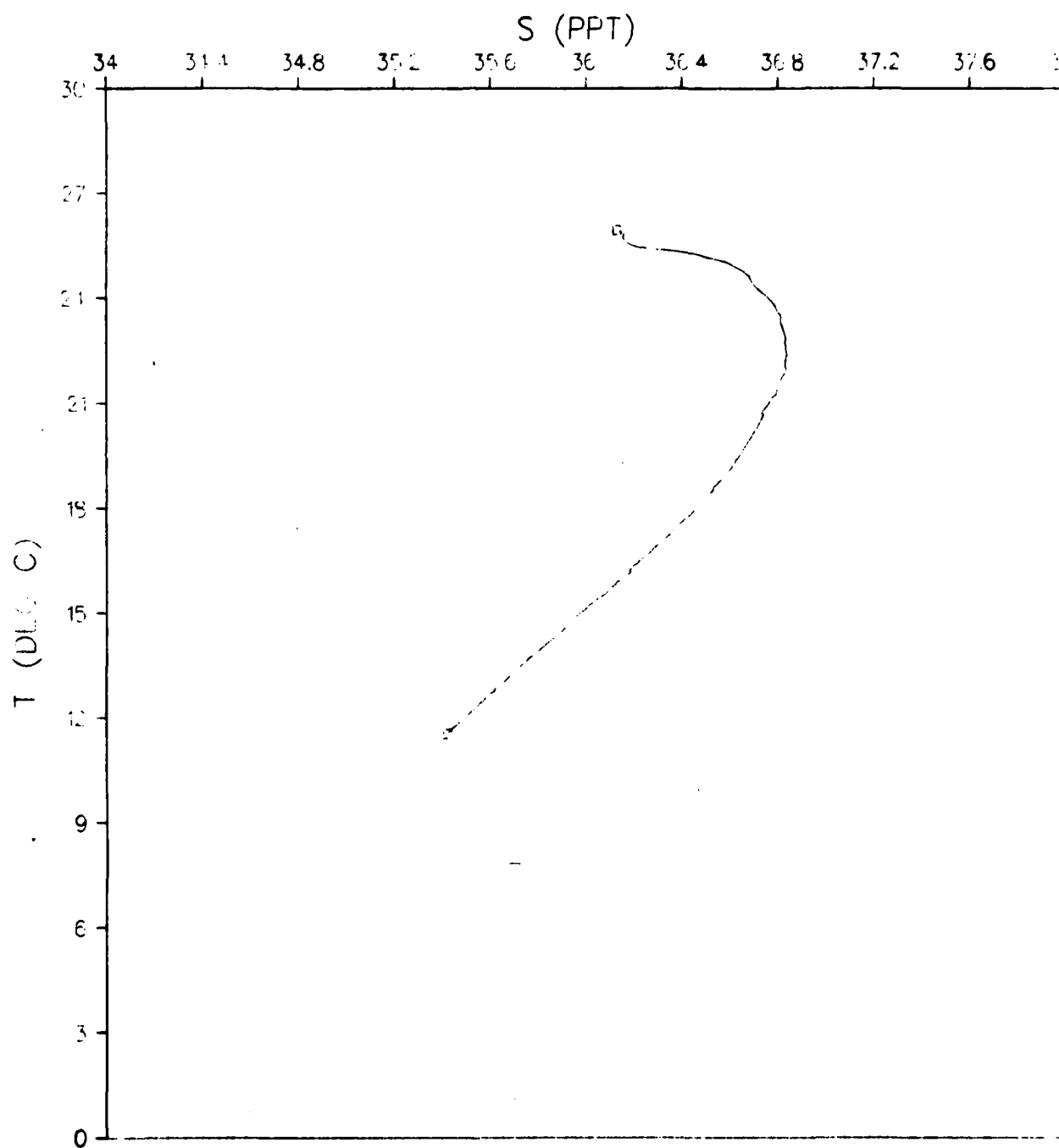


Figure 367.

ATCM 70 DEPLOYMENT
STATION 100-3

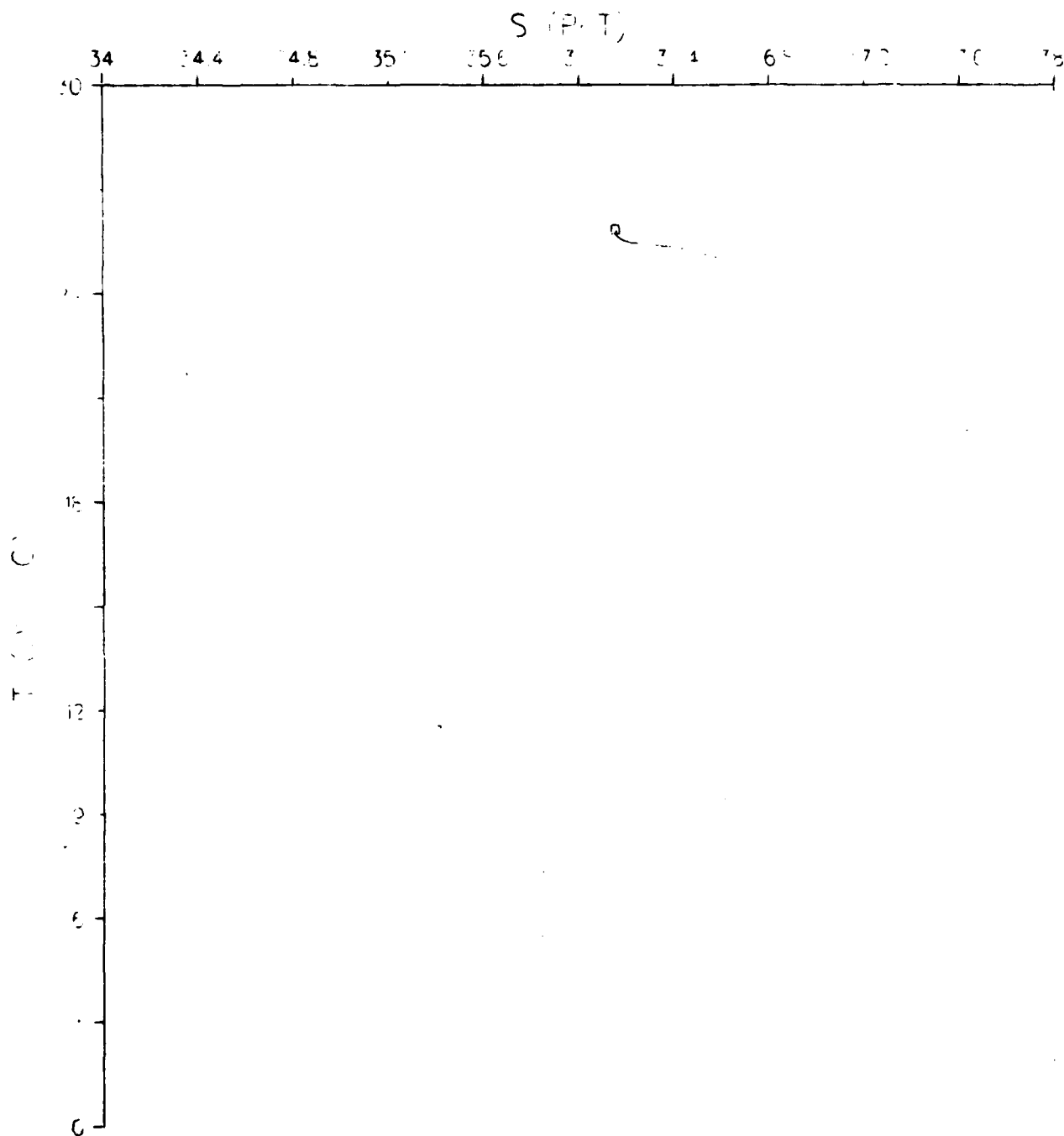


Figure 368.

ATOM 79 DEPLOYMENT
STATION 100034

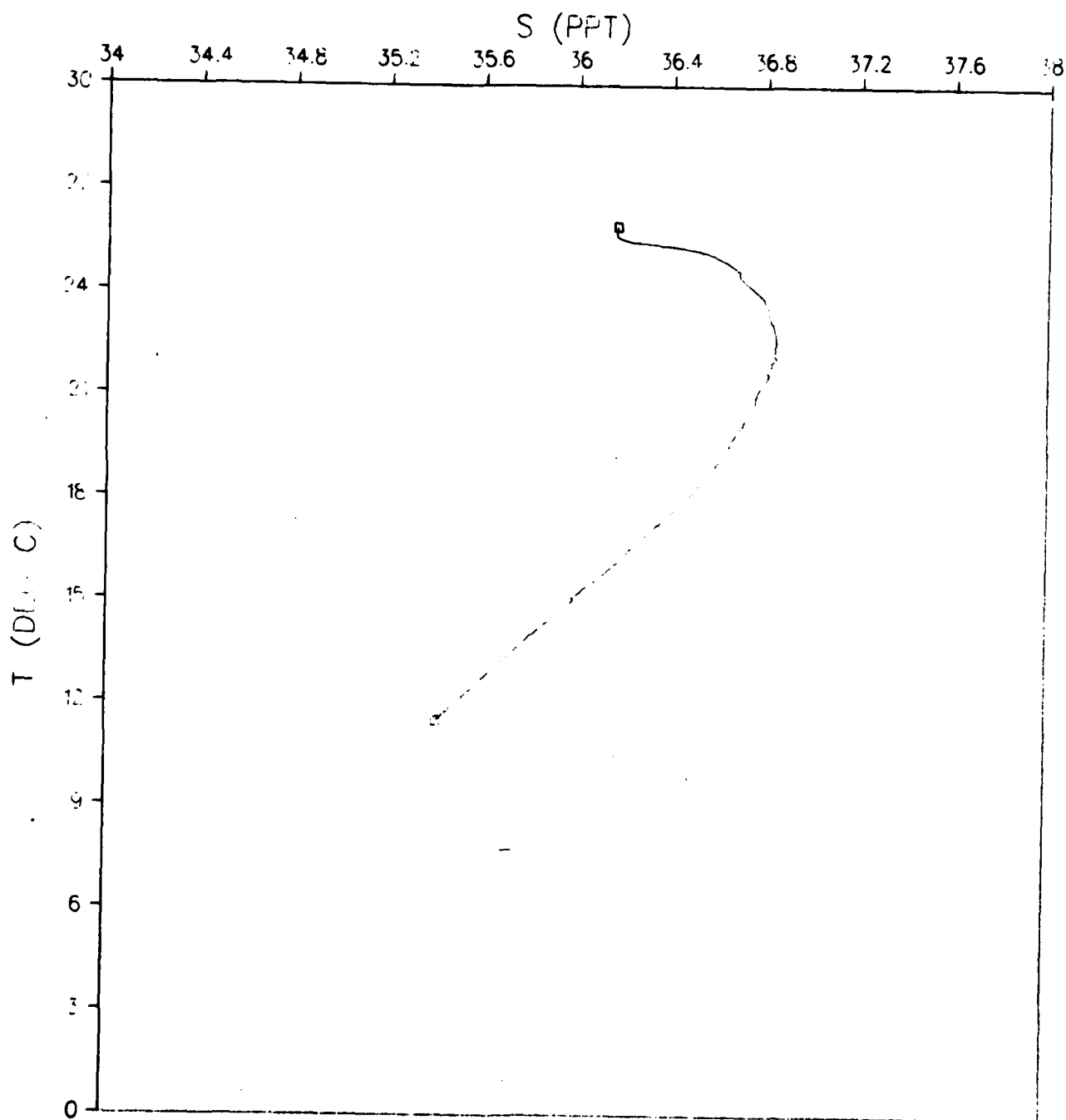


Figure 369.

4.4 CTD Data - Recovery Cruise

4.4.1 Temperature and Salinity vs. Depth (Figures 370-409)

4.4.2 Brunt-Väisälä Frequency and Sigma-t vs. Depth (Figures 410-449)

4.4.3 Temperature vs. Salinity (Figures 450-490)

ATOM 79 RECOVERY
STATION 200001

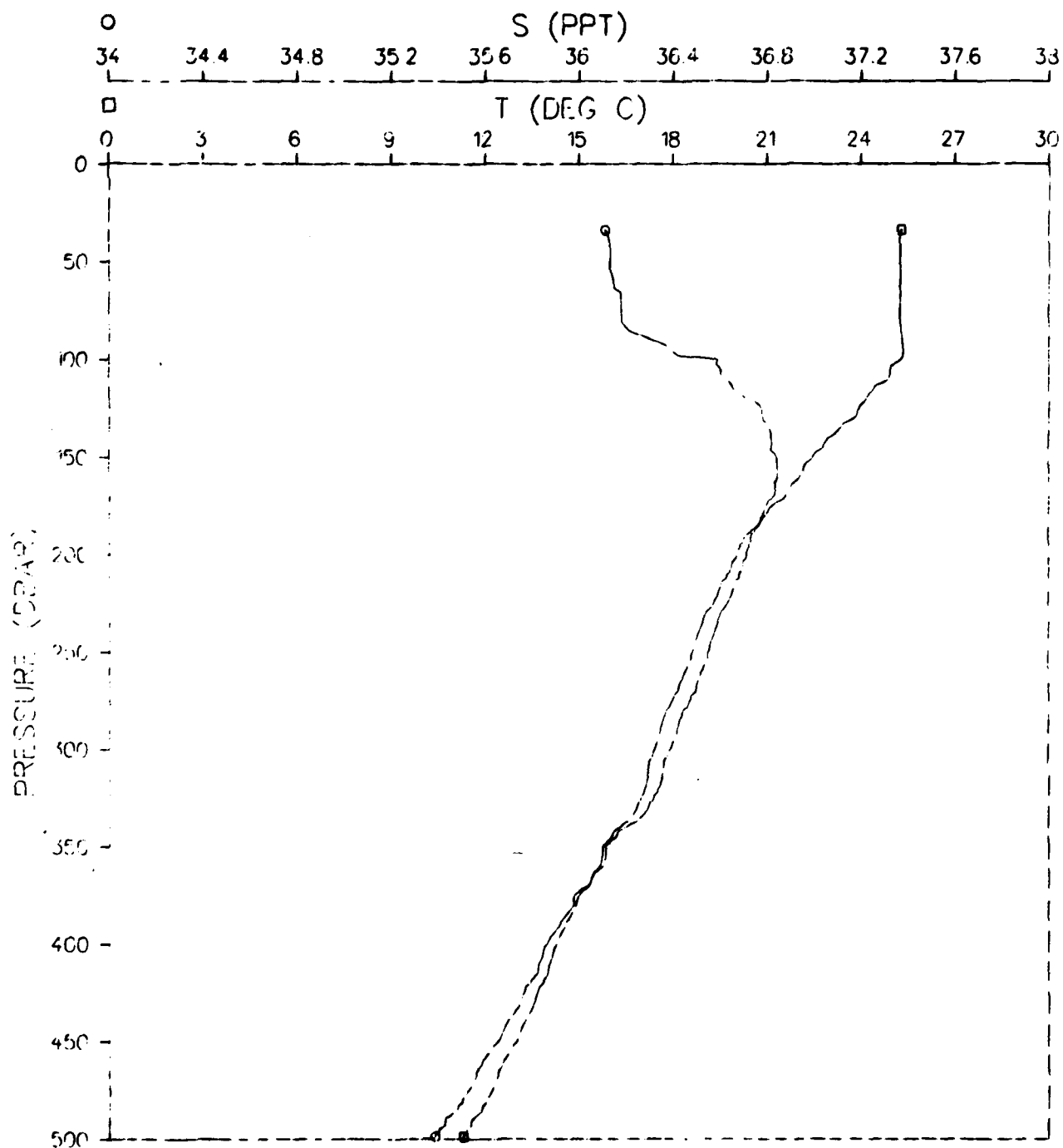


Figure 370.

ATOM 79 RECOVERY
STATION 200002

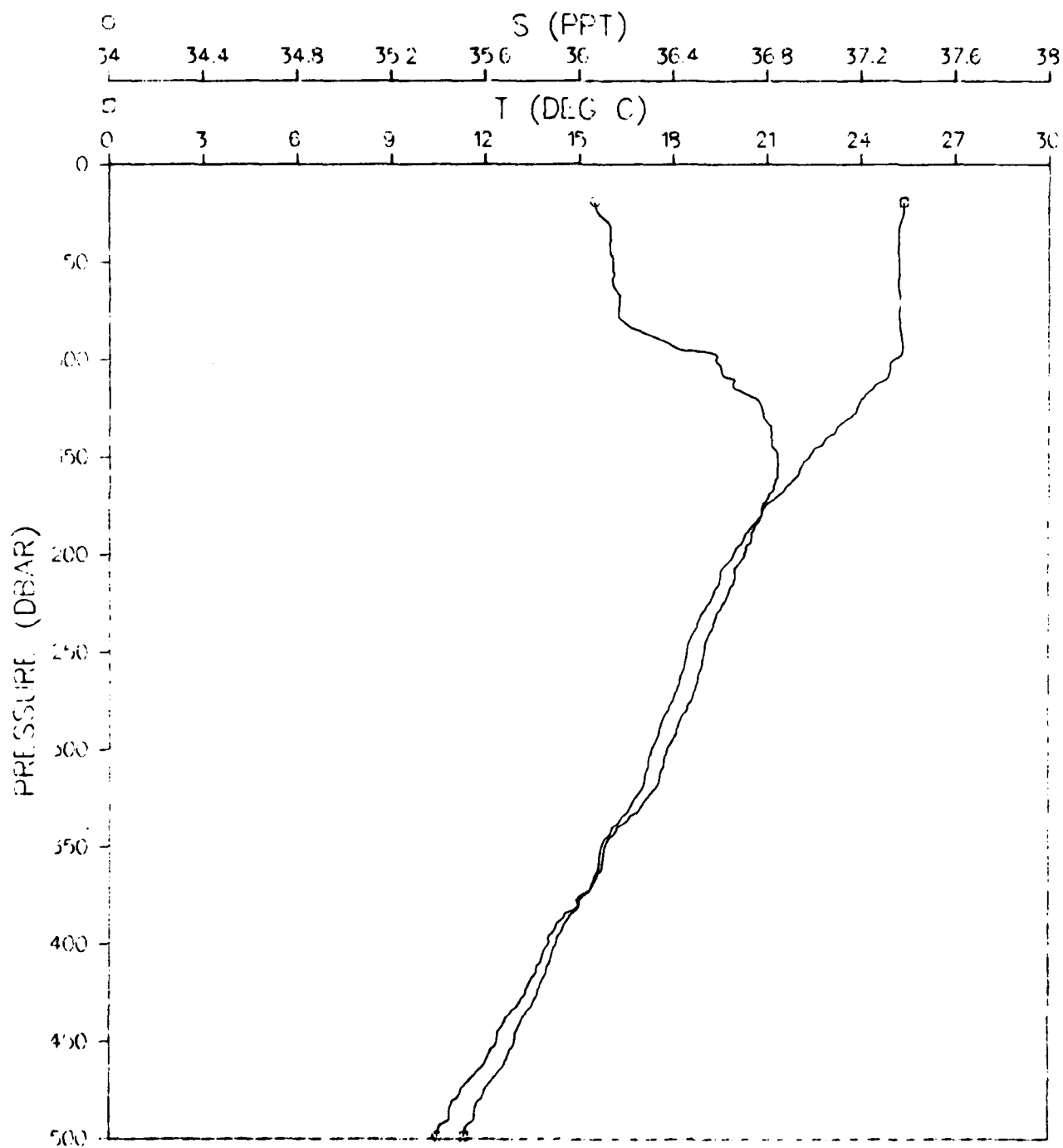


Figure 371.

ATOM 79 RECOVERY
STATION 200003

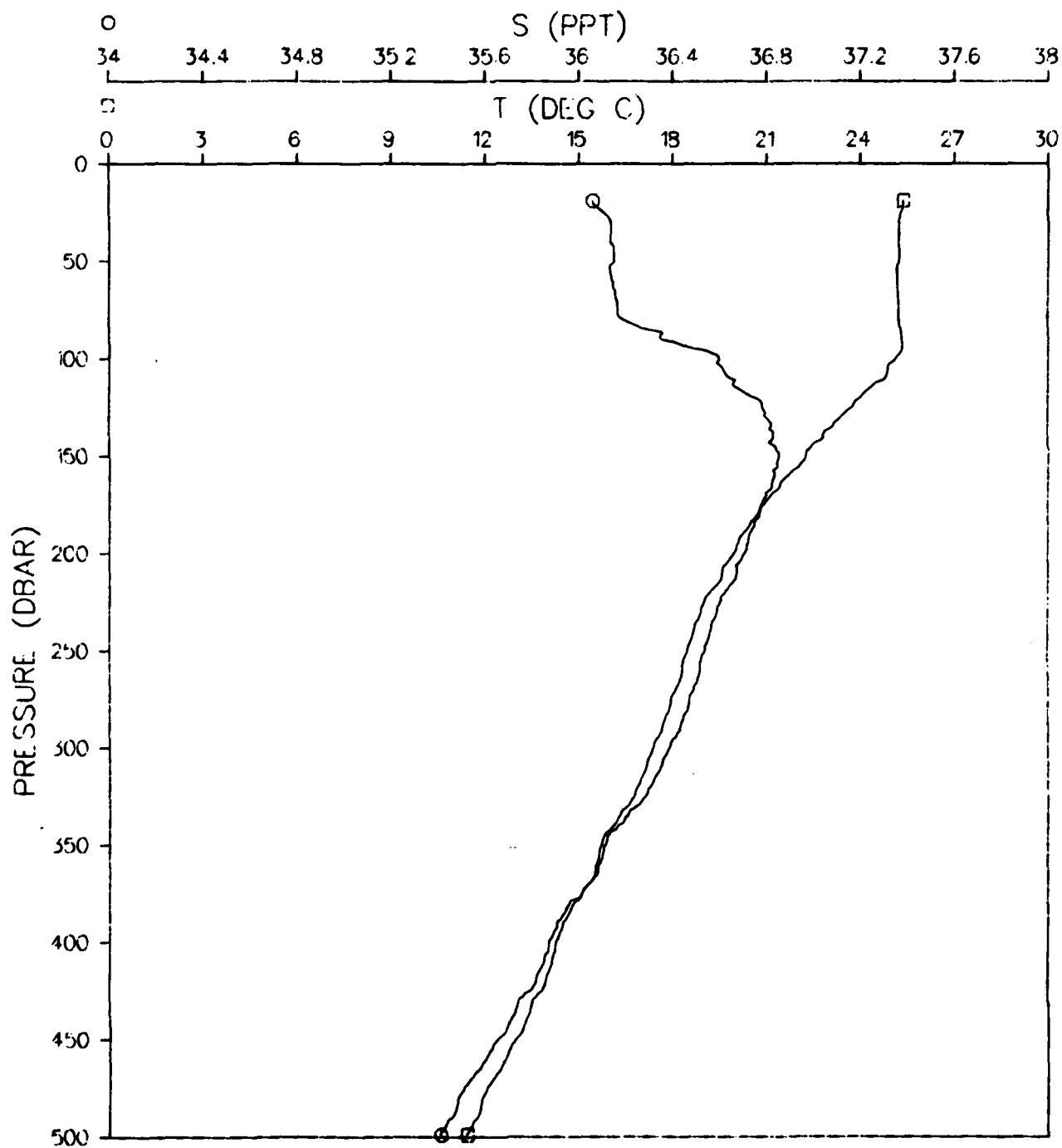


Figure 372.

ATOM 79 RECOVERY
STATION 200004

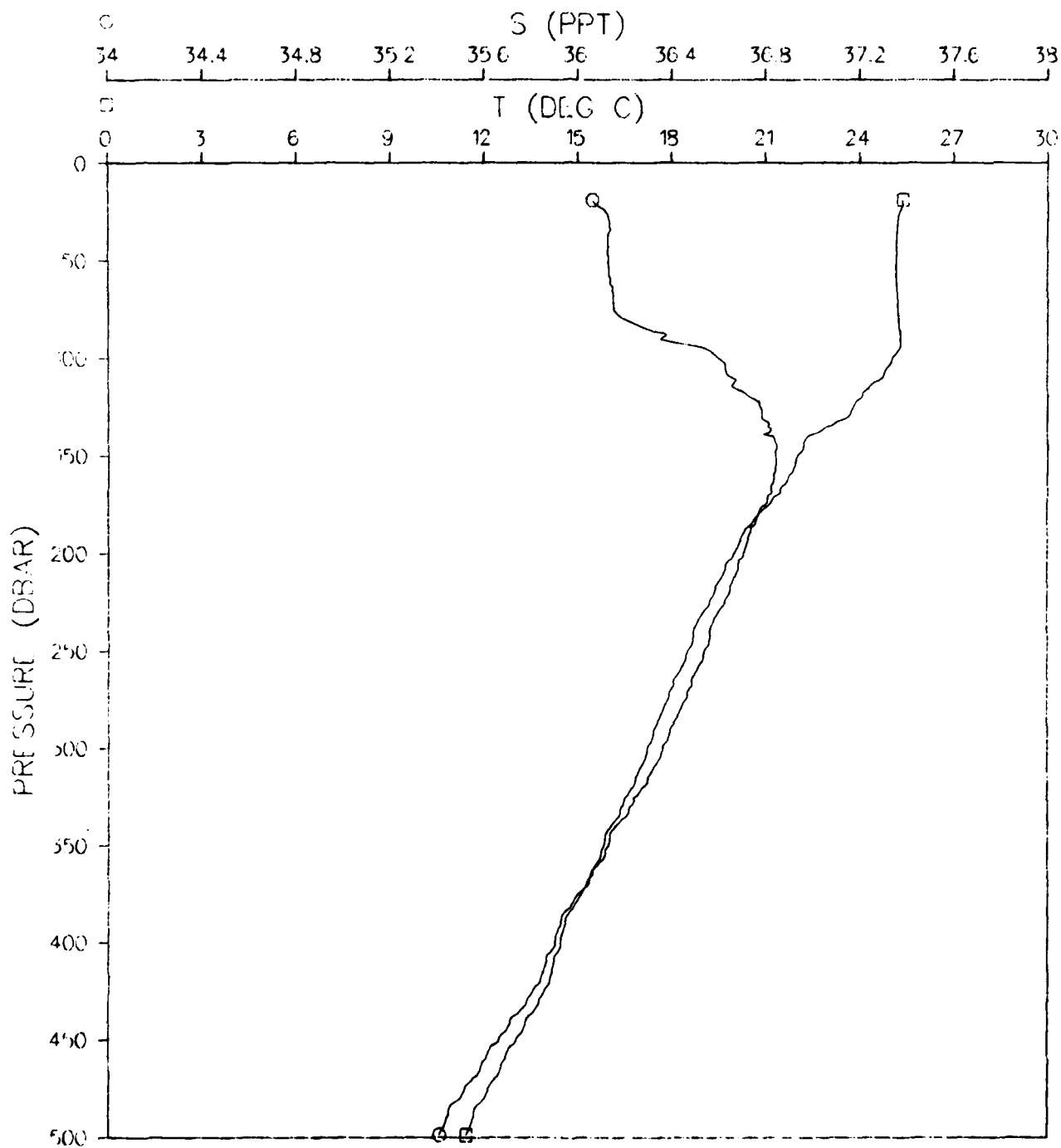


Figure 373.

ATOM 79 RECOVERY
STATION 200005

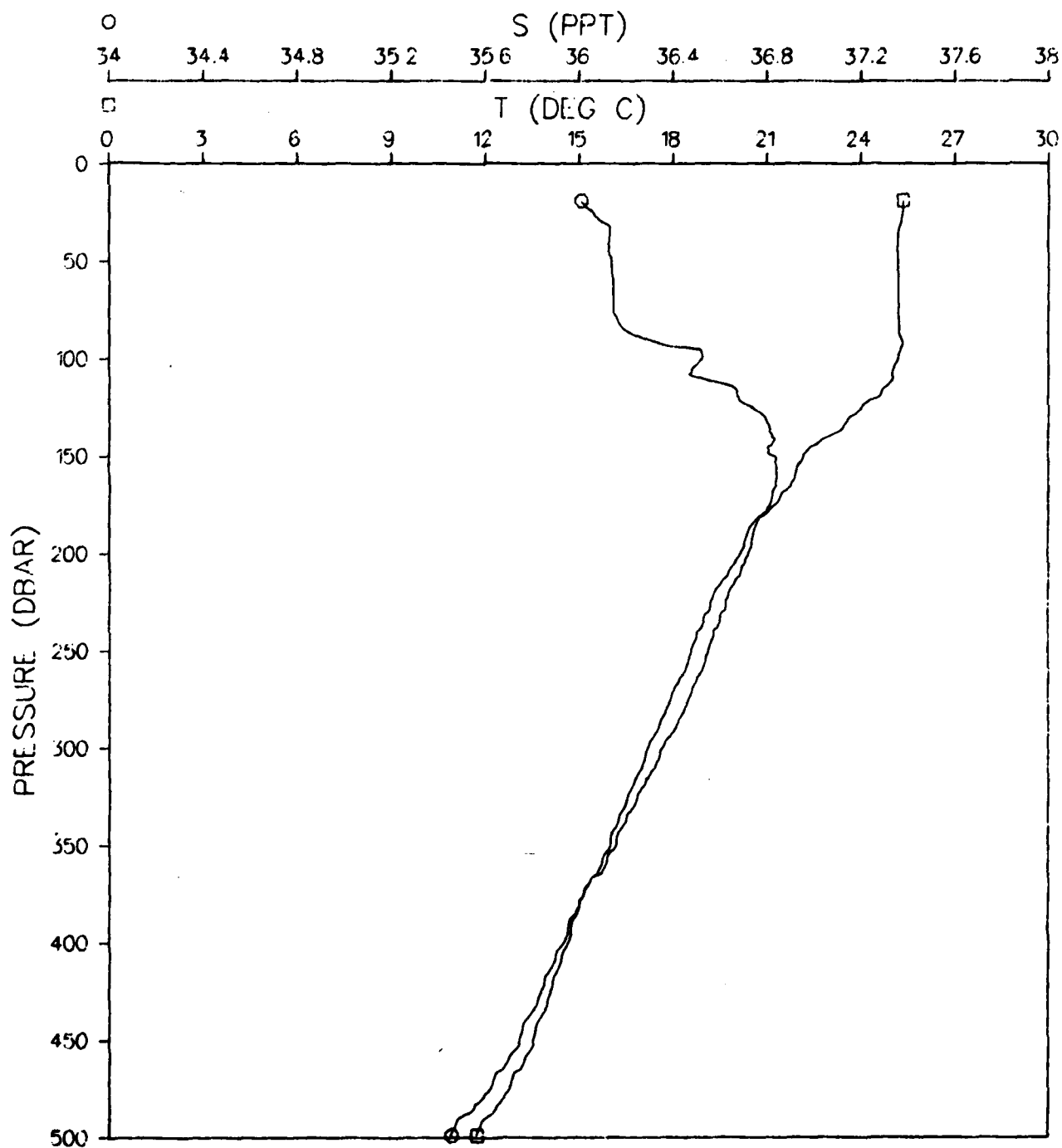


Figure 374.

ATOM 79 RECOVERY
STATION 200006

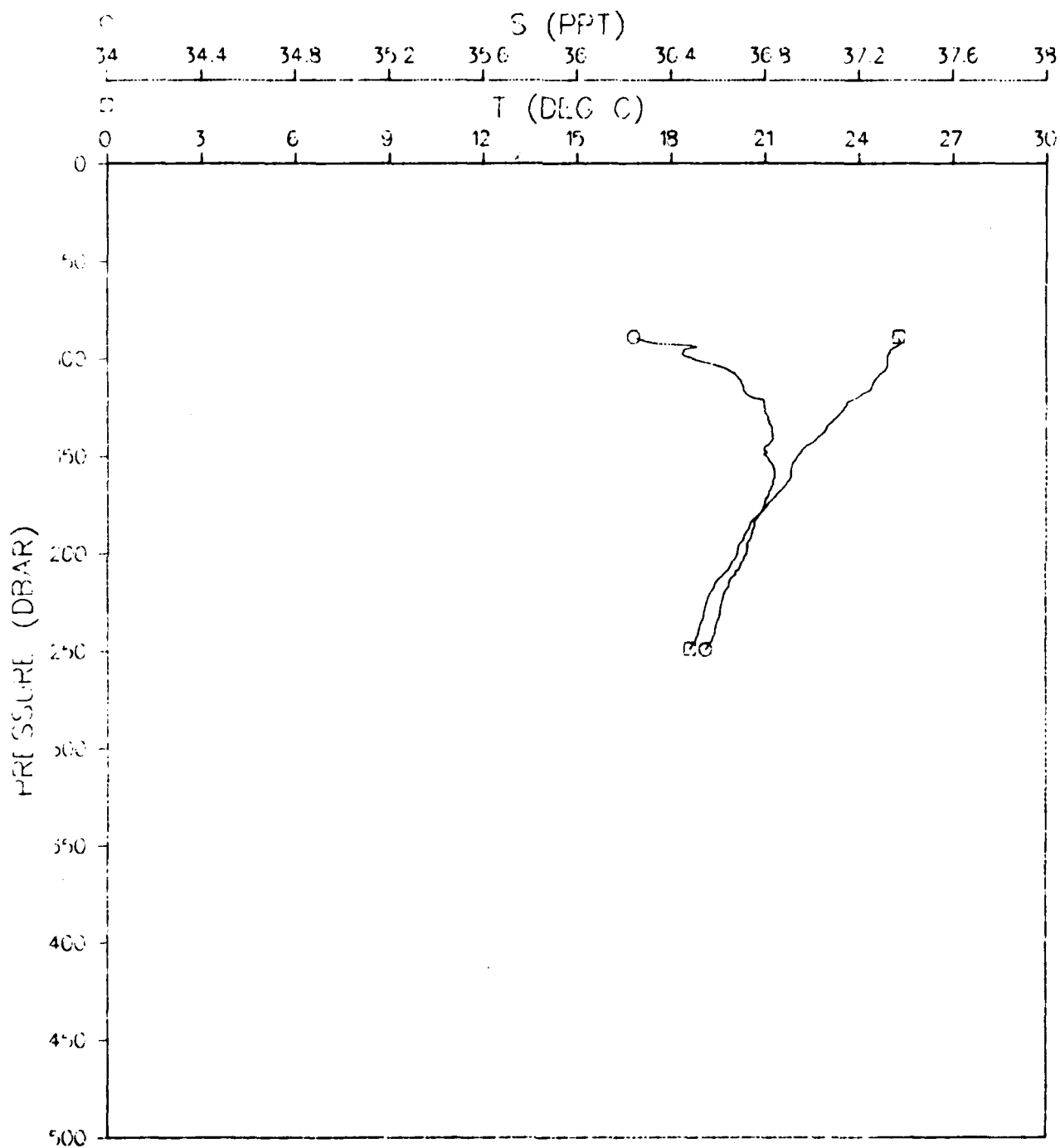


Figure 375.

ATOM 79 RECOVERY
STATION 200007

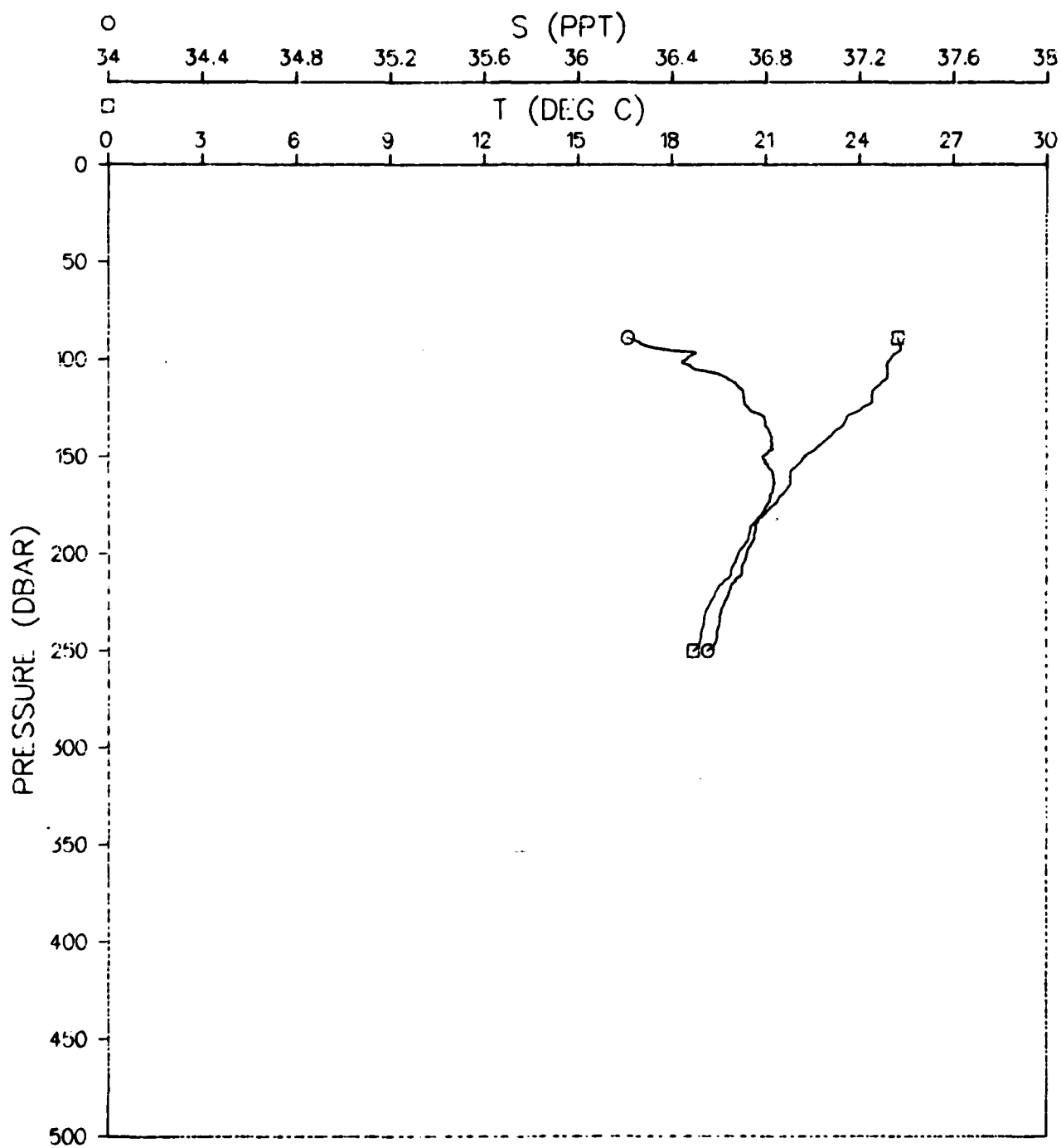


Figure 376.

ATOM 79 RECOVERY STATION 200008

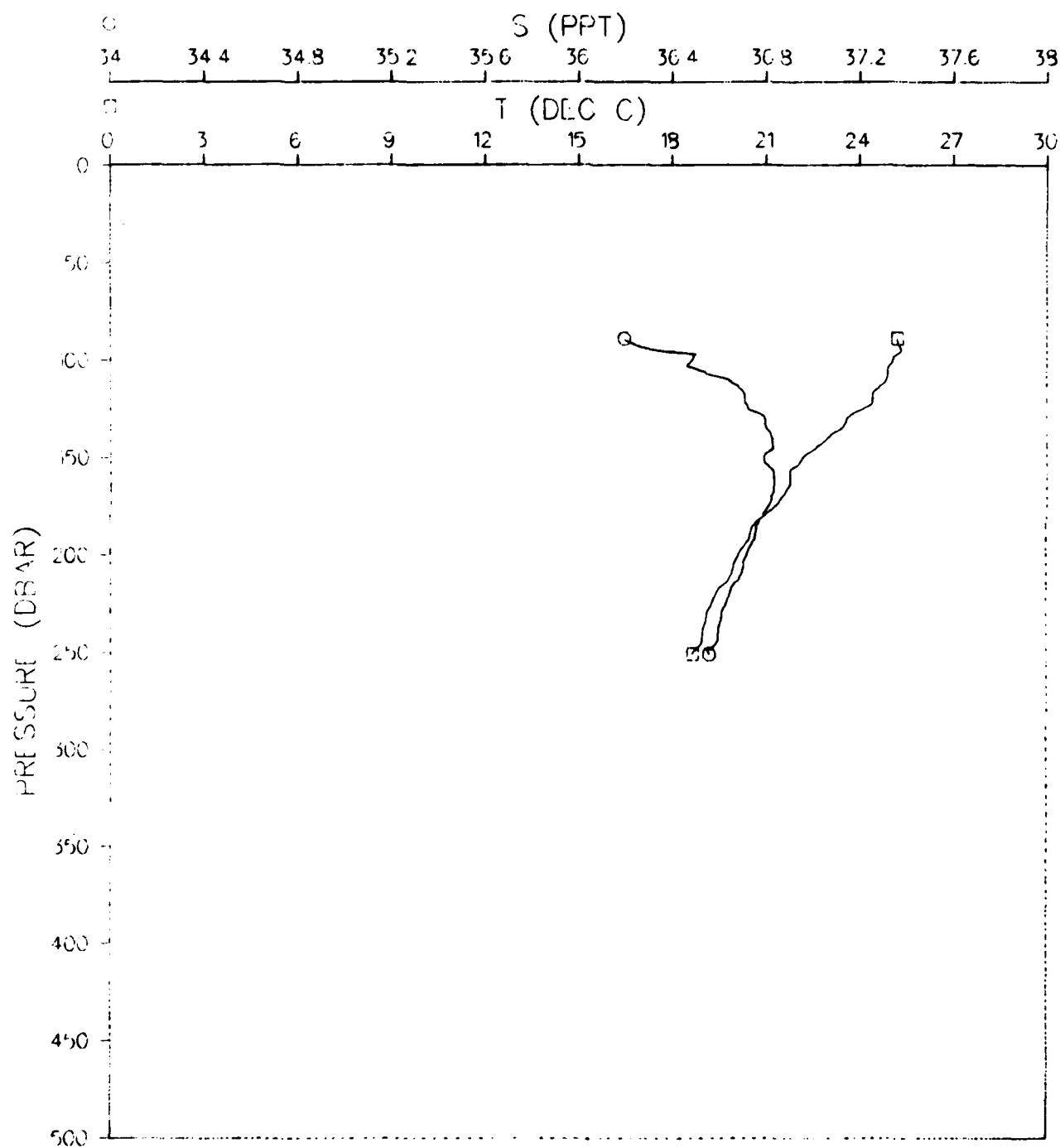


Figure 377.

ATOM 79 RECOVERY
STATION 200009

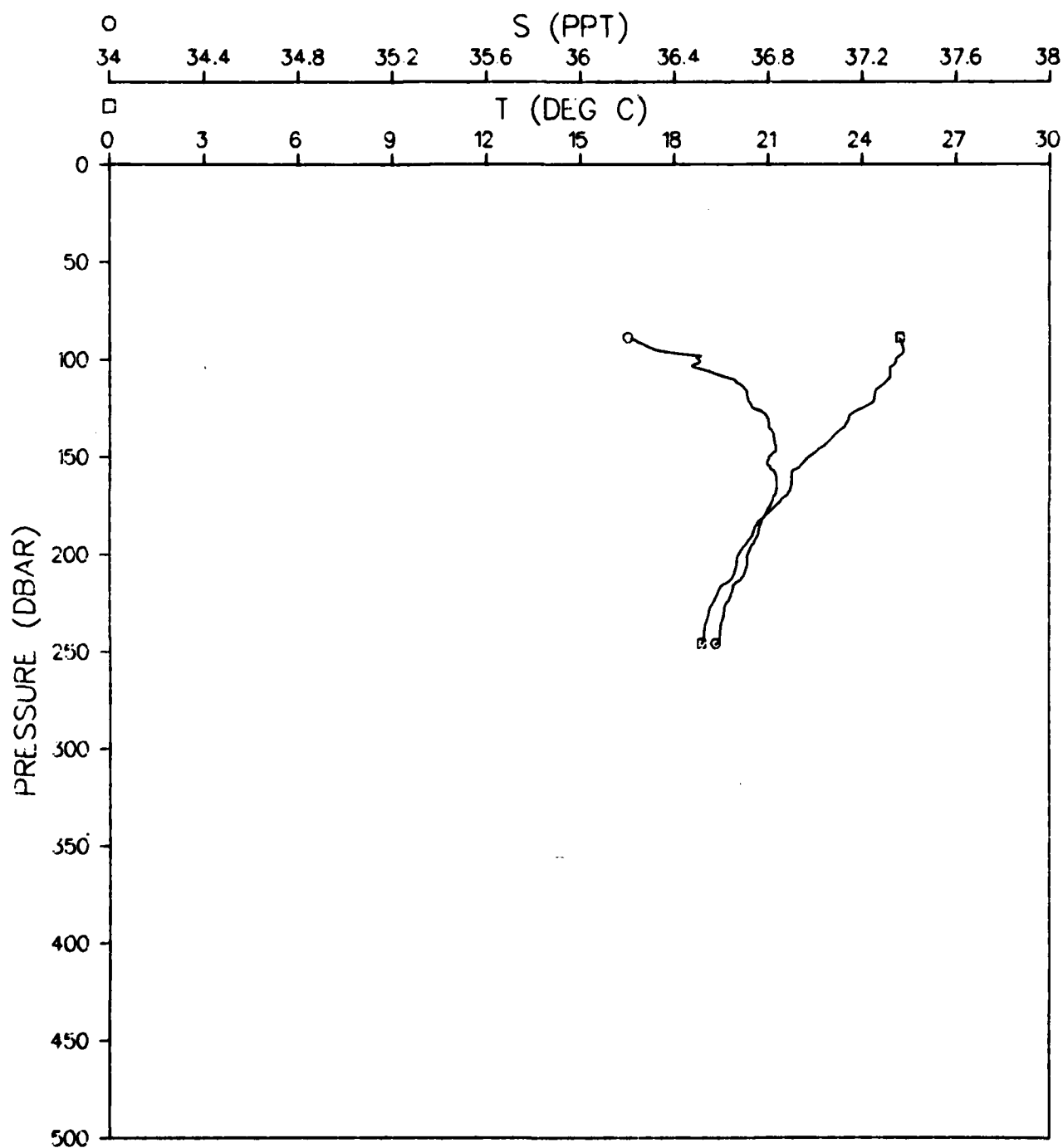


Figure 378.

ATOM 79 RECOVERY STATION 200010

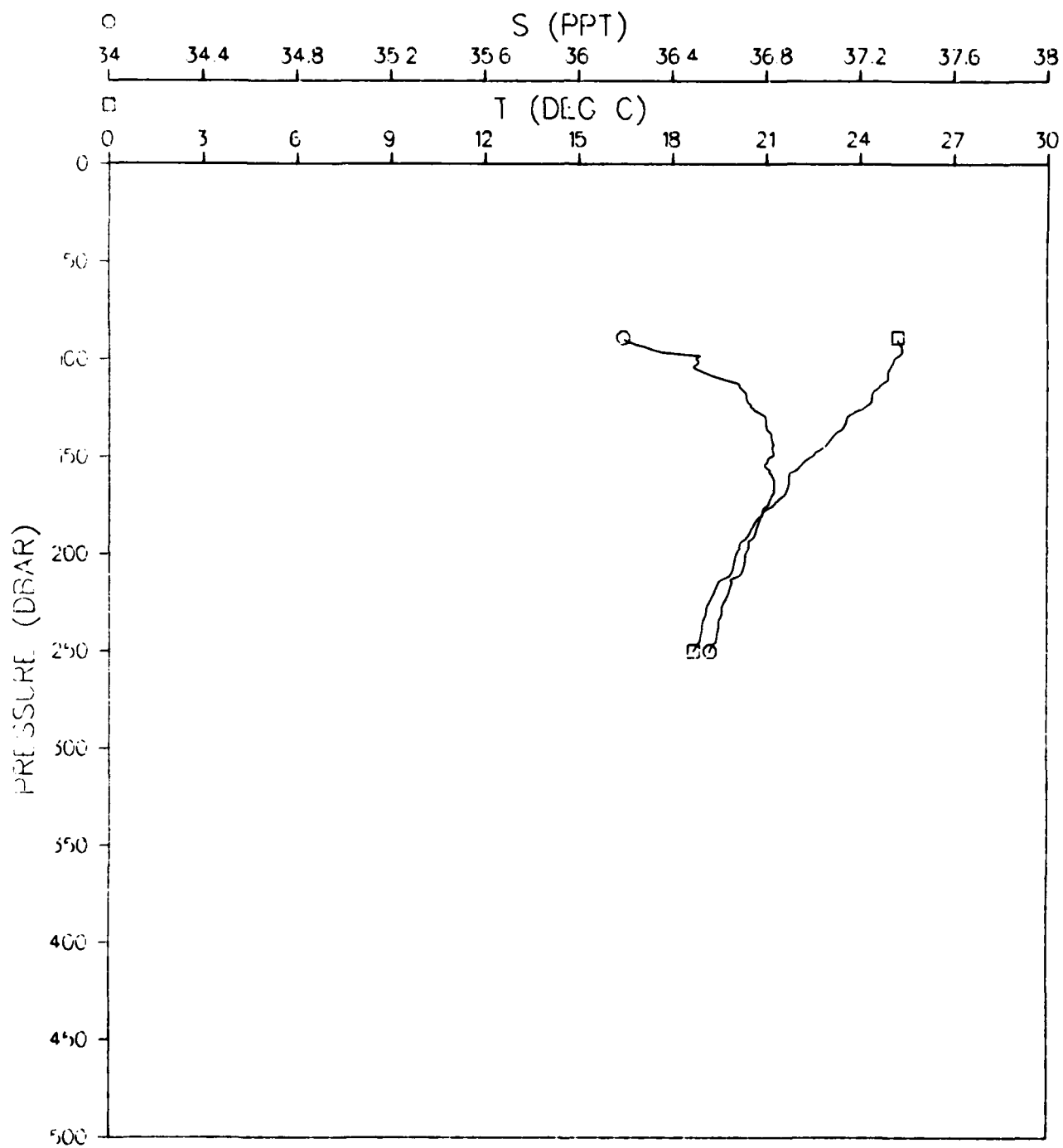


Figure 379.

ATOM 79 RECOVERY
STATION 200011

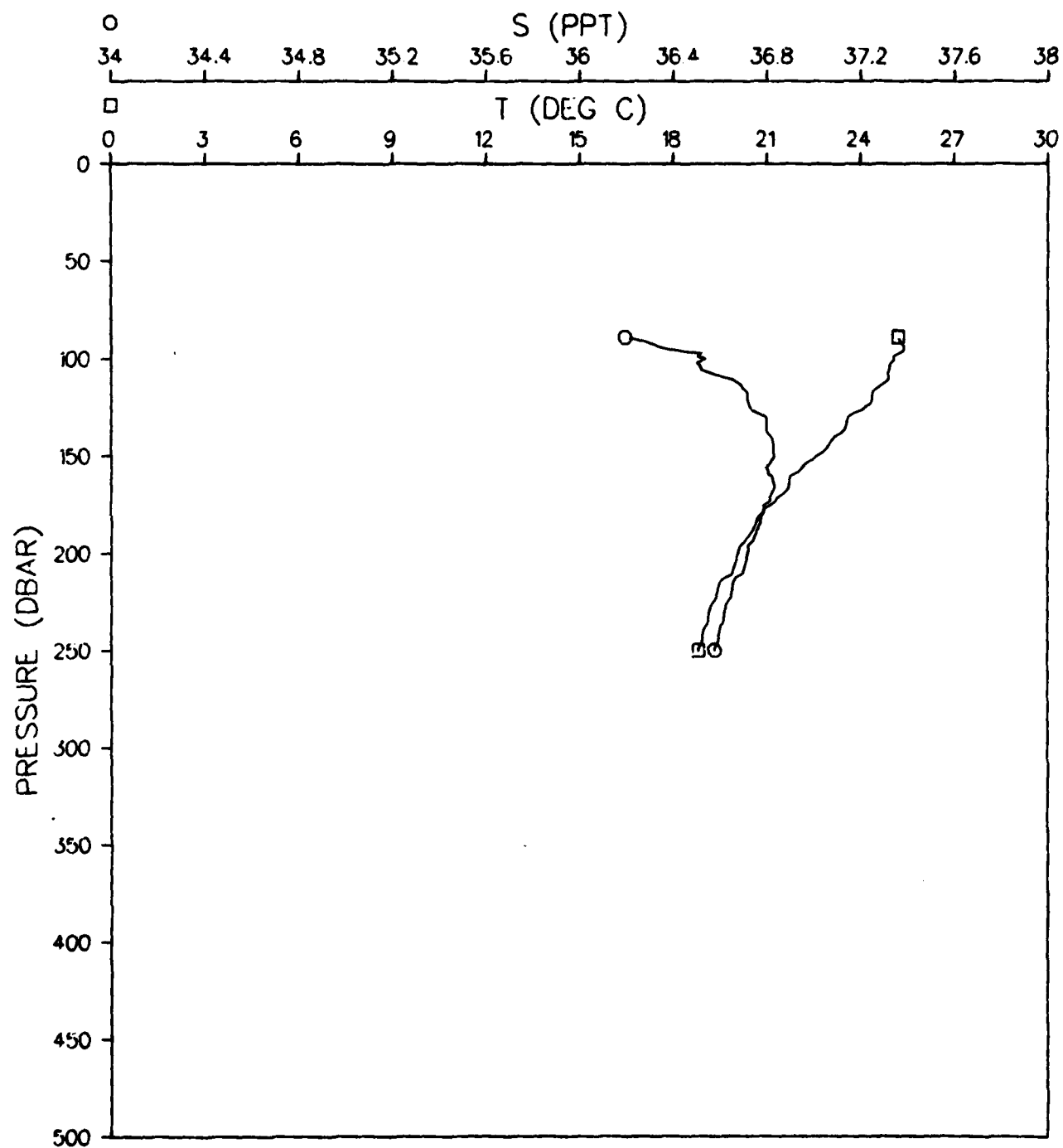


Figure 380.

ATOM 79 RECOVERY
STATION 200012

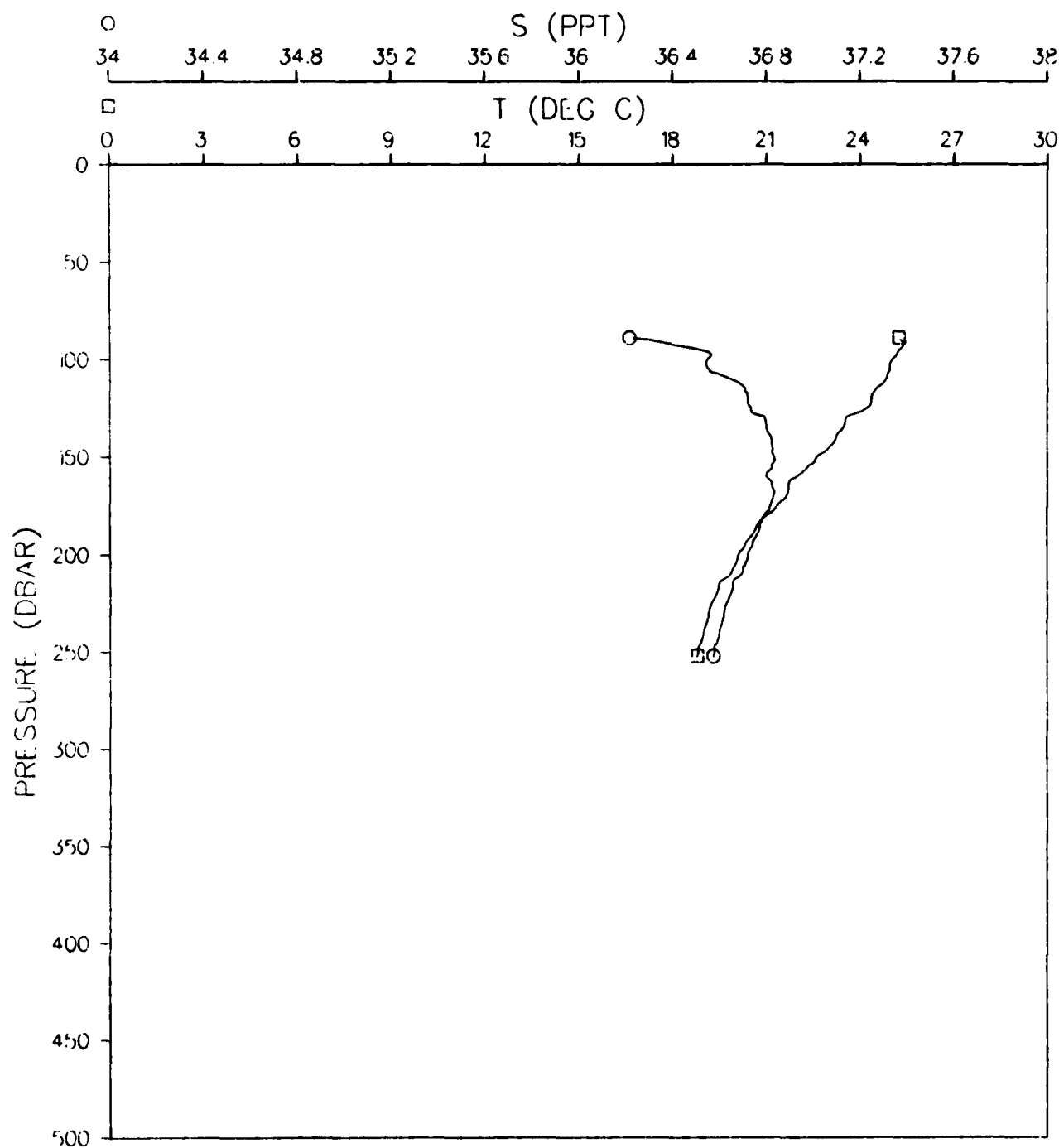


Figure 381.

ATOM 79 RECOVERY
STATION 200013

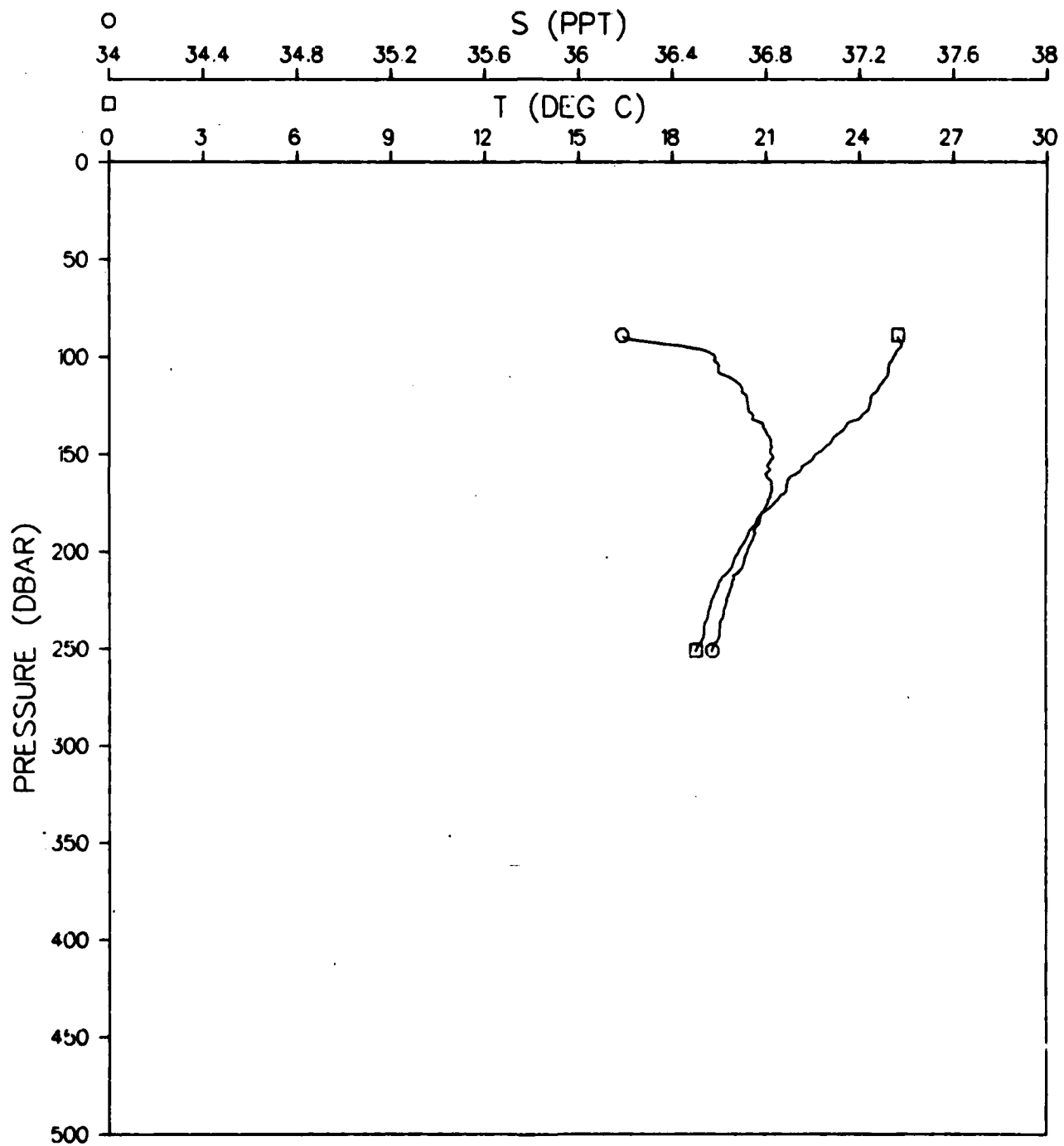


Figure 382.

ATOM 79 RECOVERY
STATION 200014

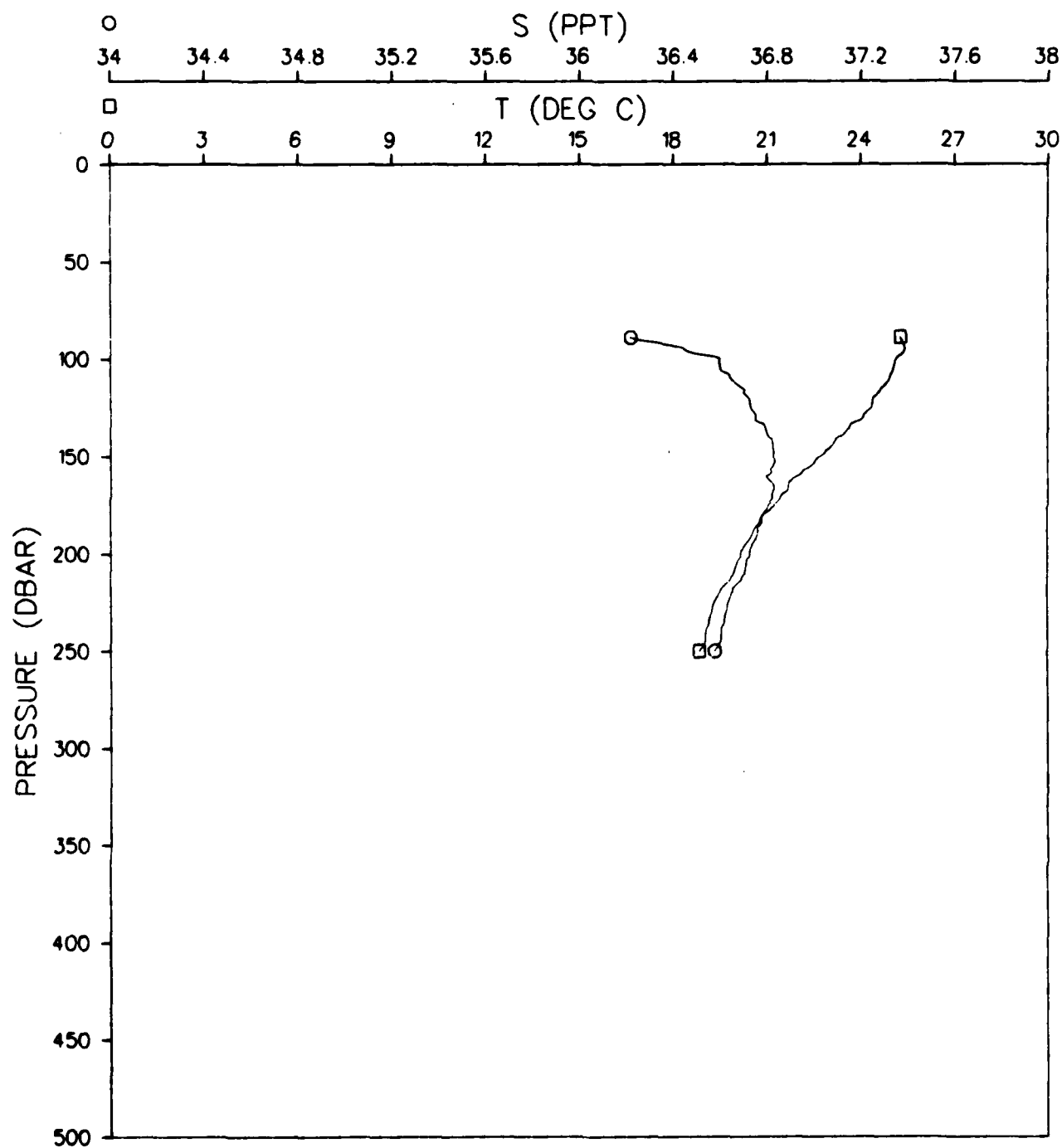


Figure 383.

ATOM 79 RECOVERY
STATION 200015

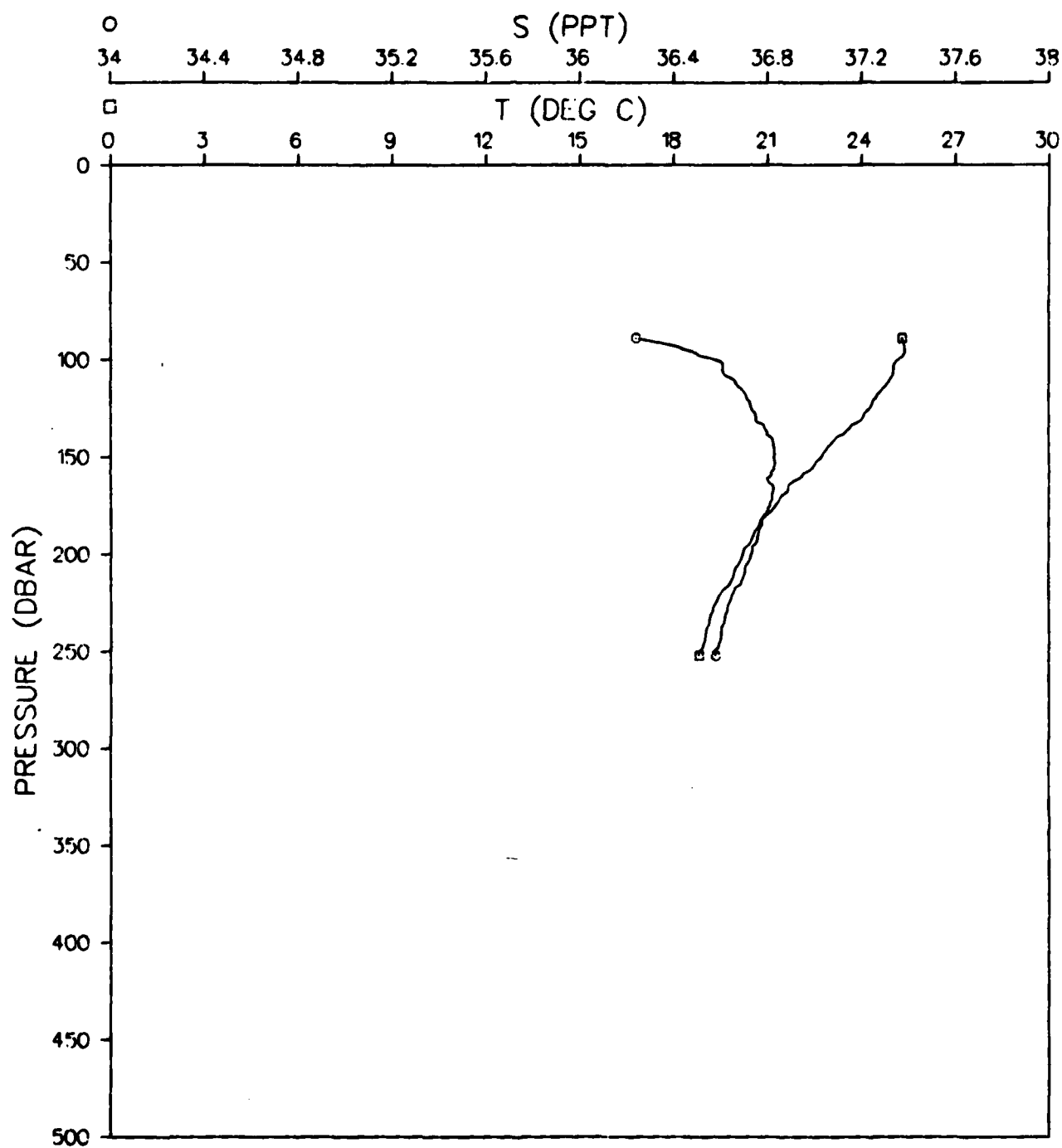


Figure 384.

ATOM 79 RECOVERY
STATION 200016

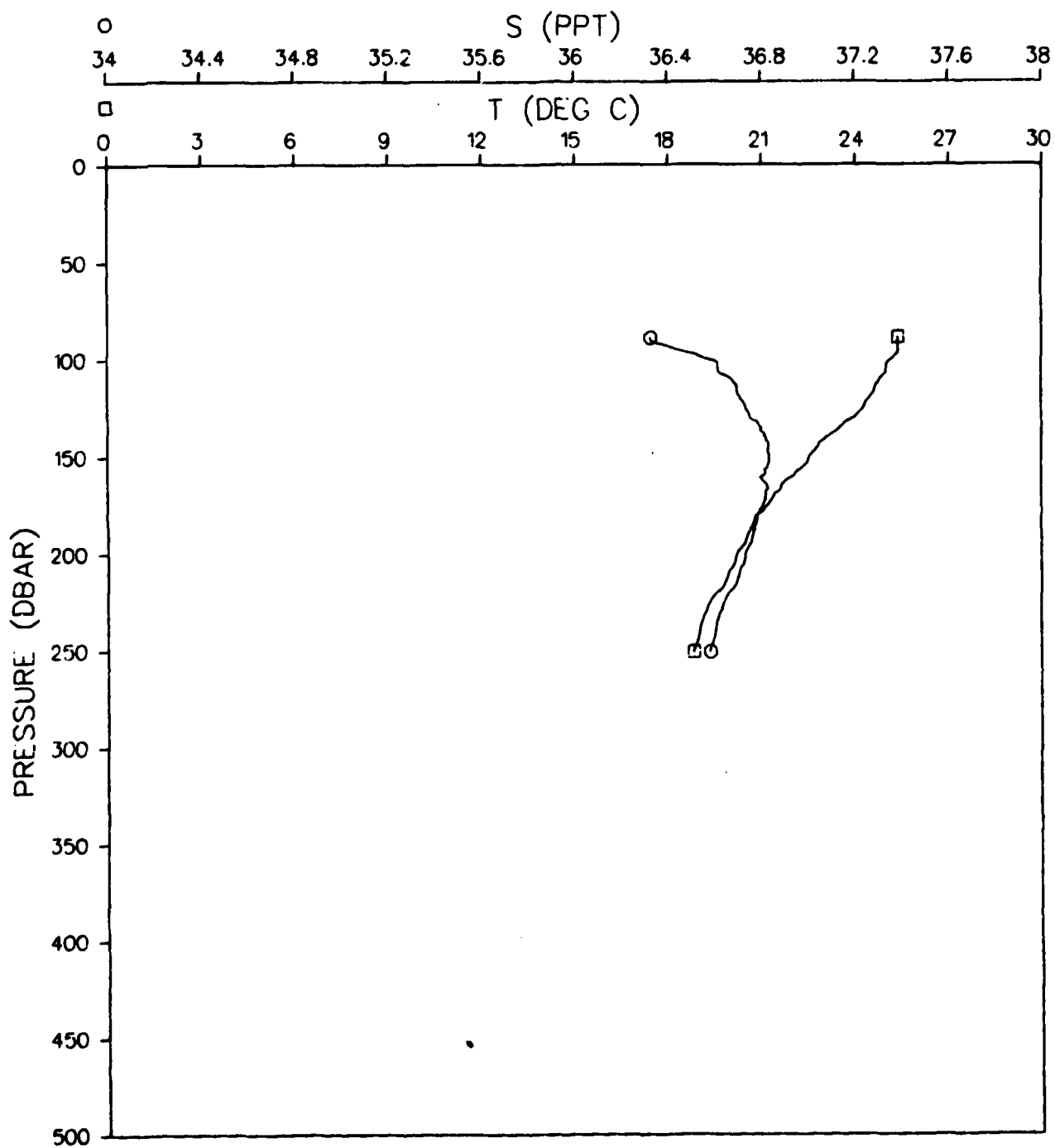


Figure 385.

ATOM 79 RECOVERY
STATION 200017

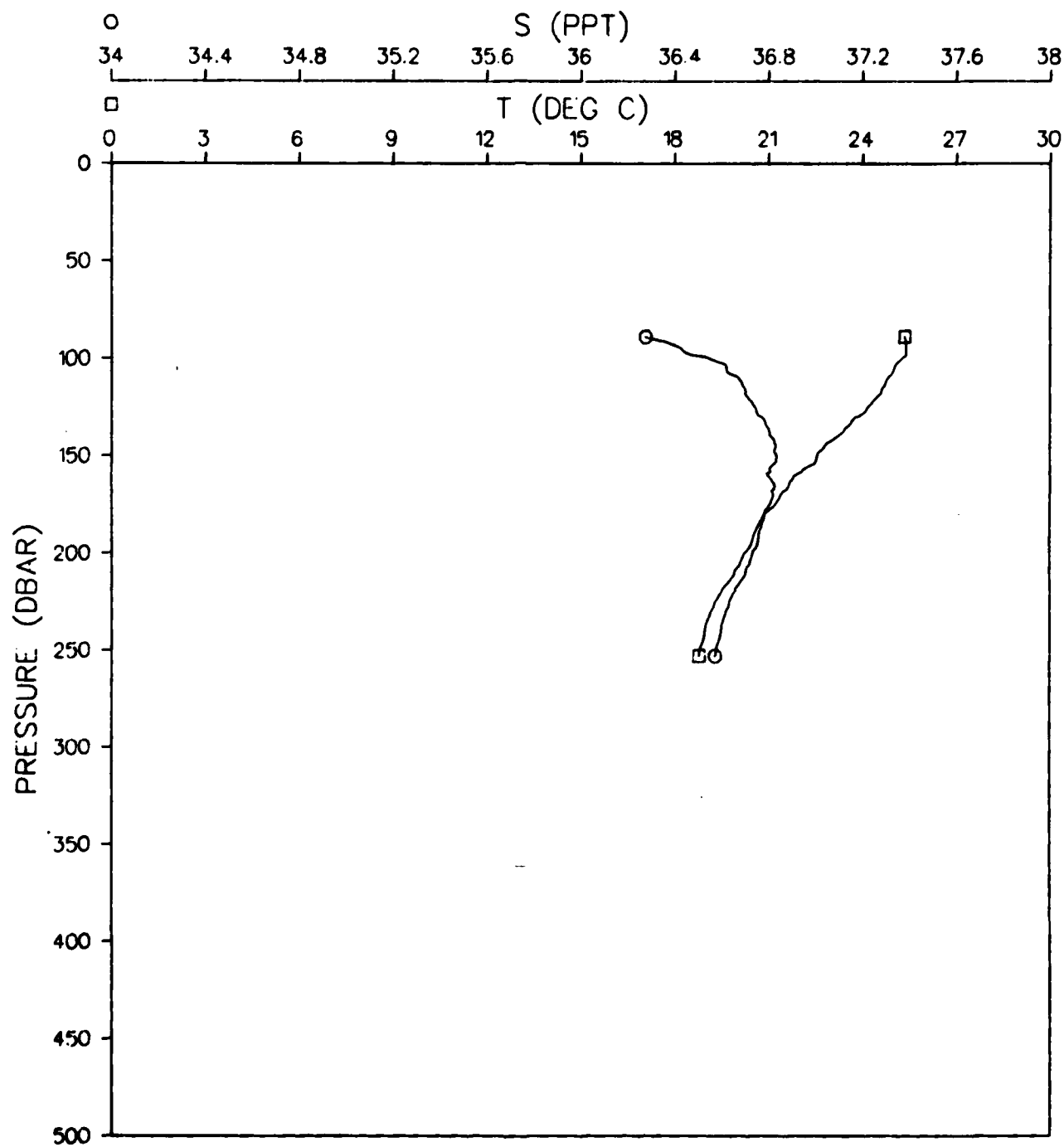


Figure 386.

ATOM 79 RECOVERY STATION 200018

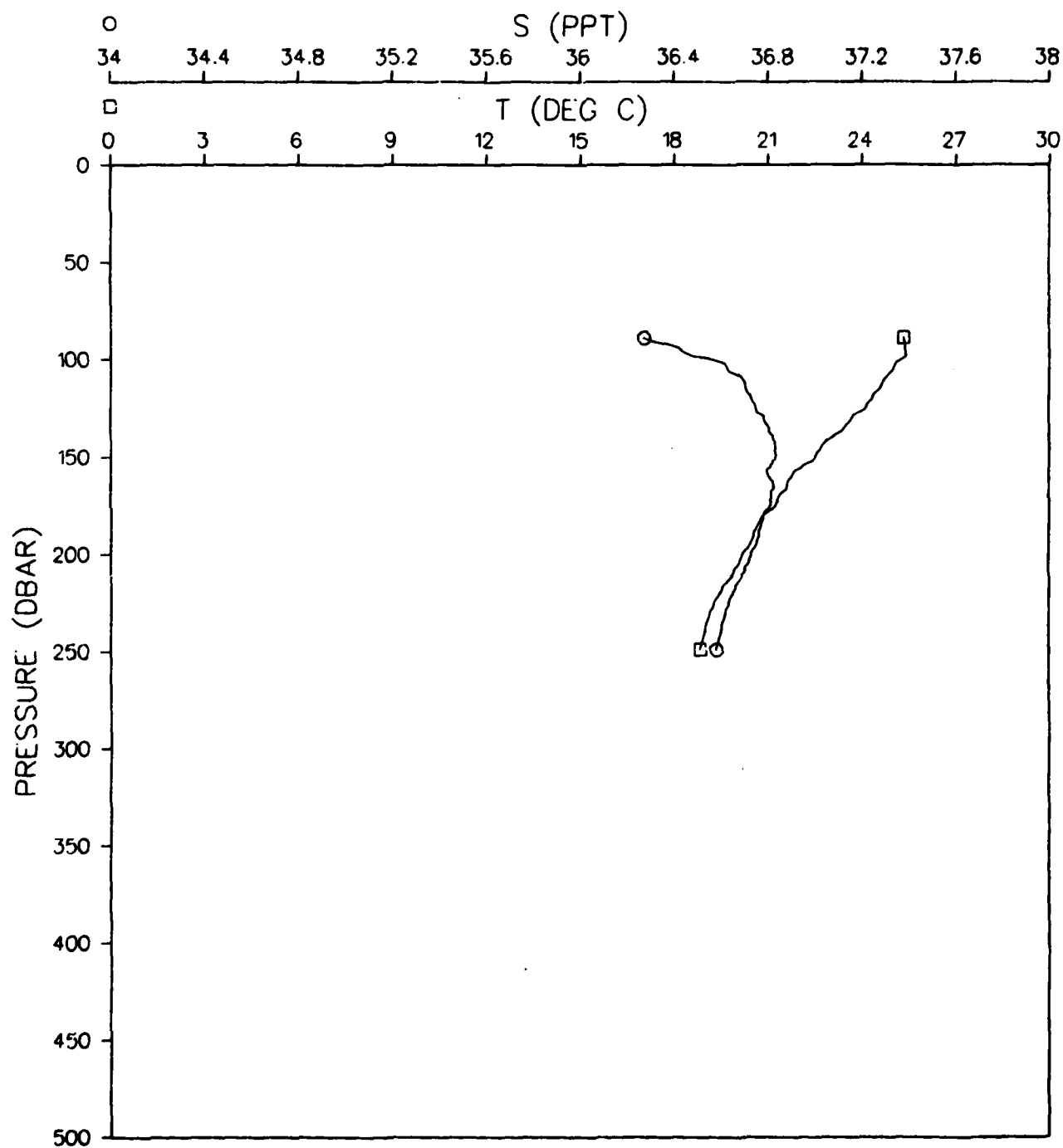


Figure 387.

ATOM 79 RECOVERY
STATION 200019

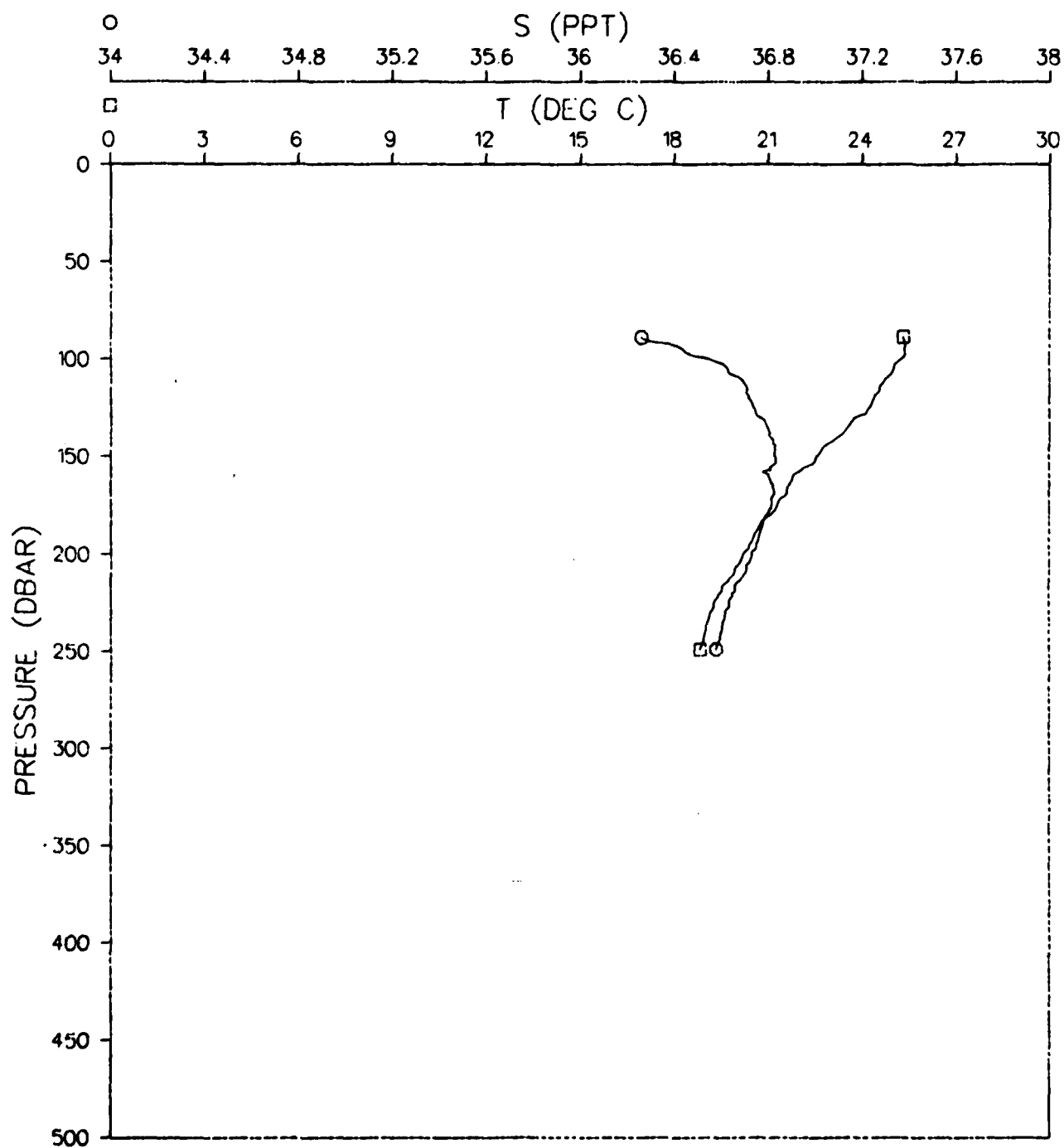


Figure 388.

ATOM 79 RECOVERY
STATION 200020

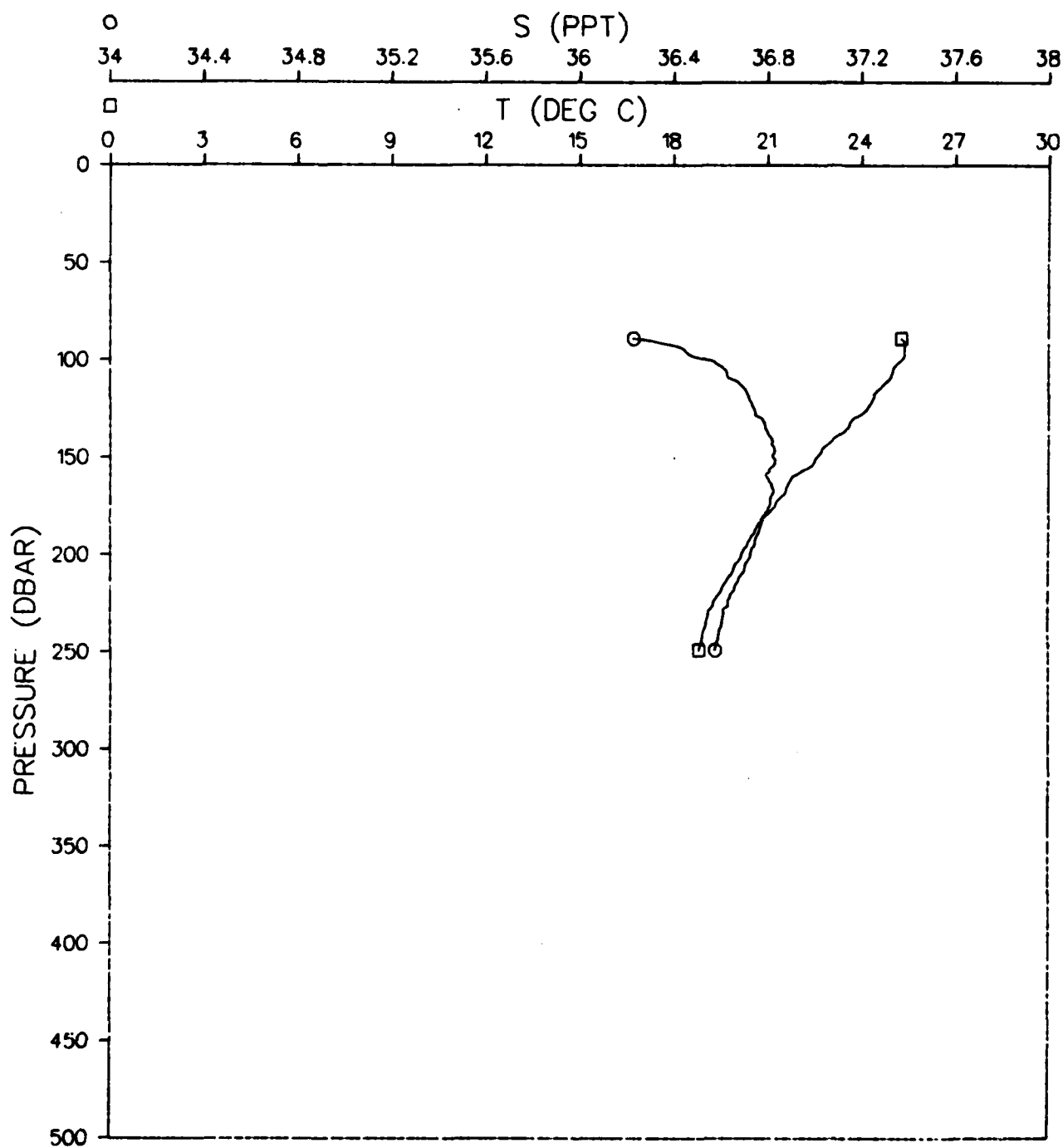


Figure 389.

ATOM 79 RECOVERY
STATION 200021

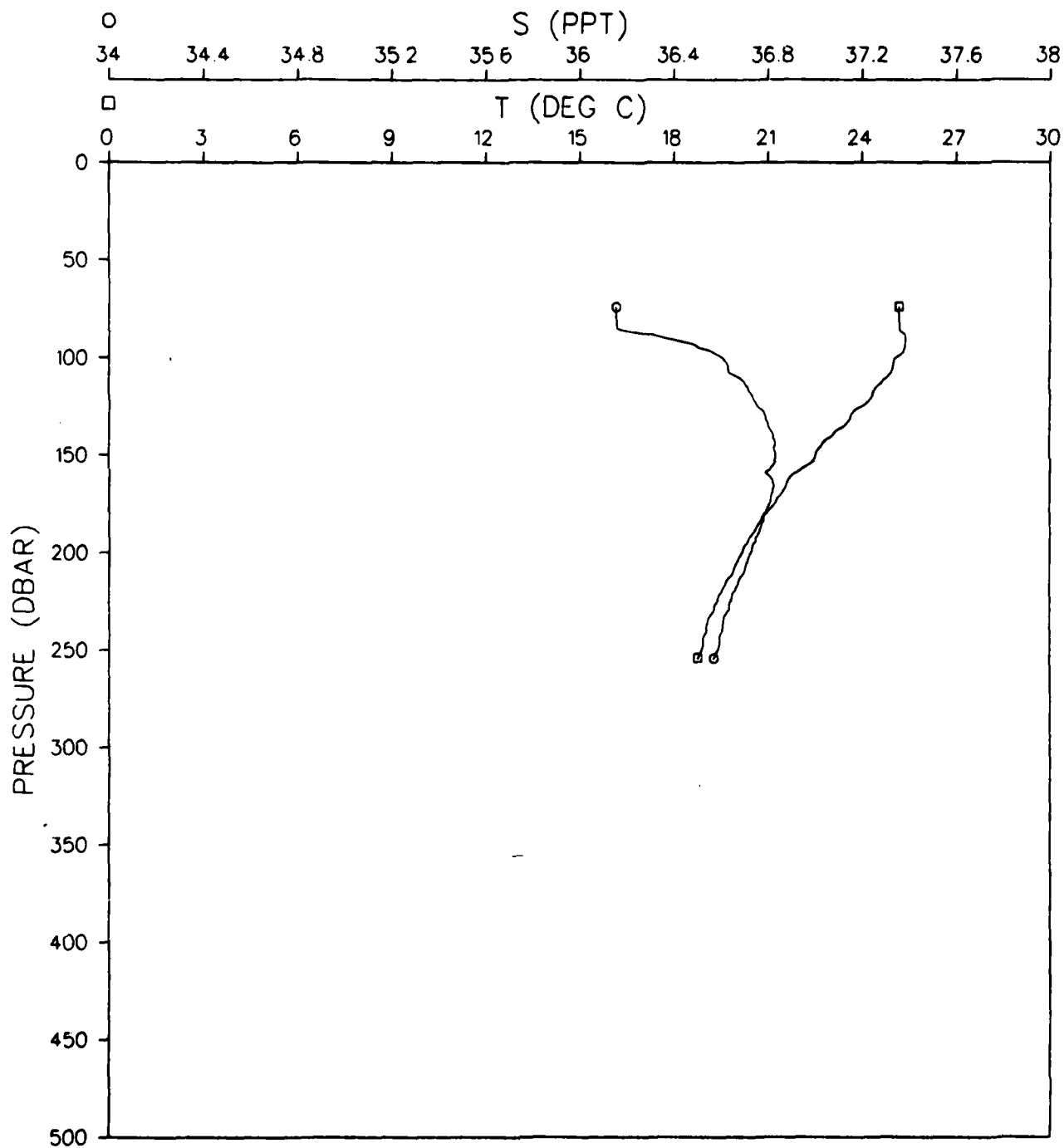


Figure 390.

ATOM 79 RECOVERY
STATION 200022

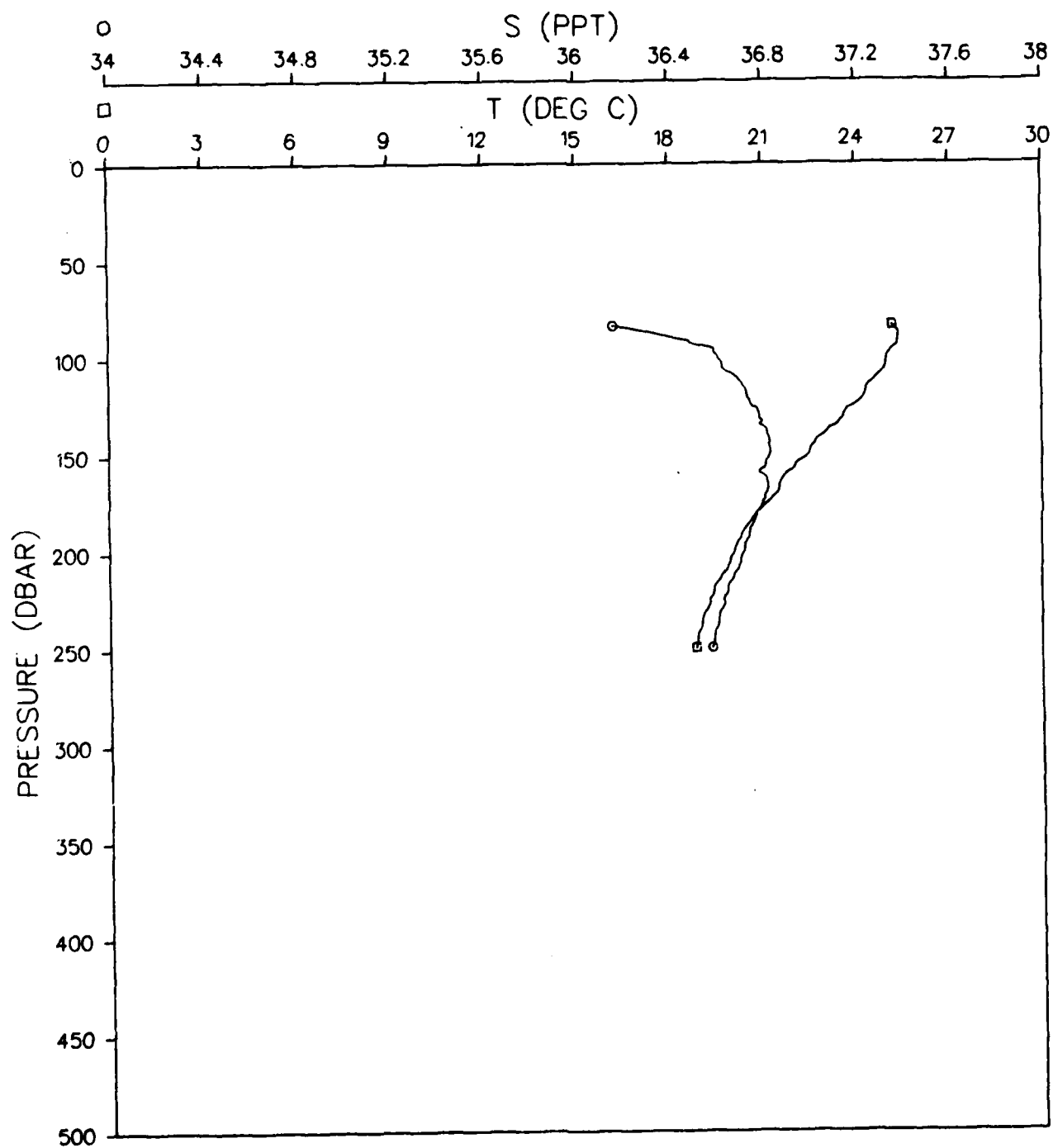


Figure 391.

ATOM 79 RECOVERY
STATION 200023

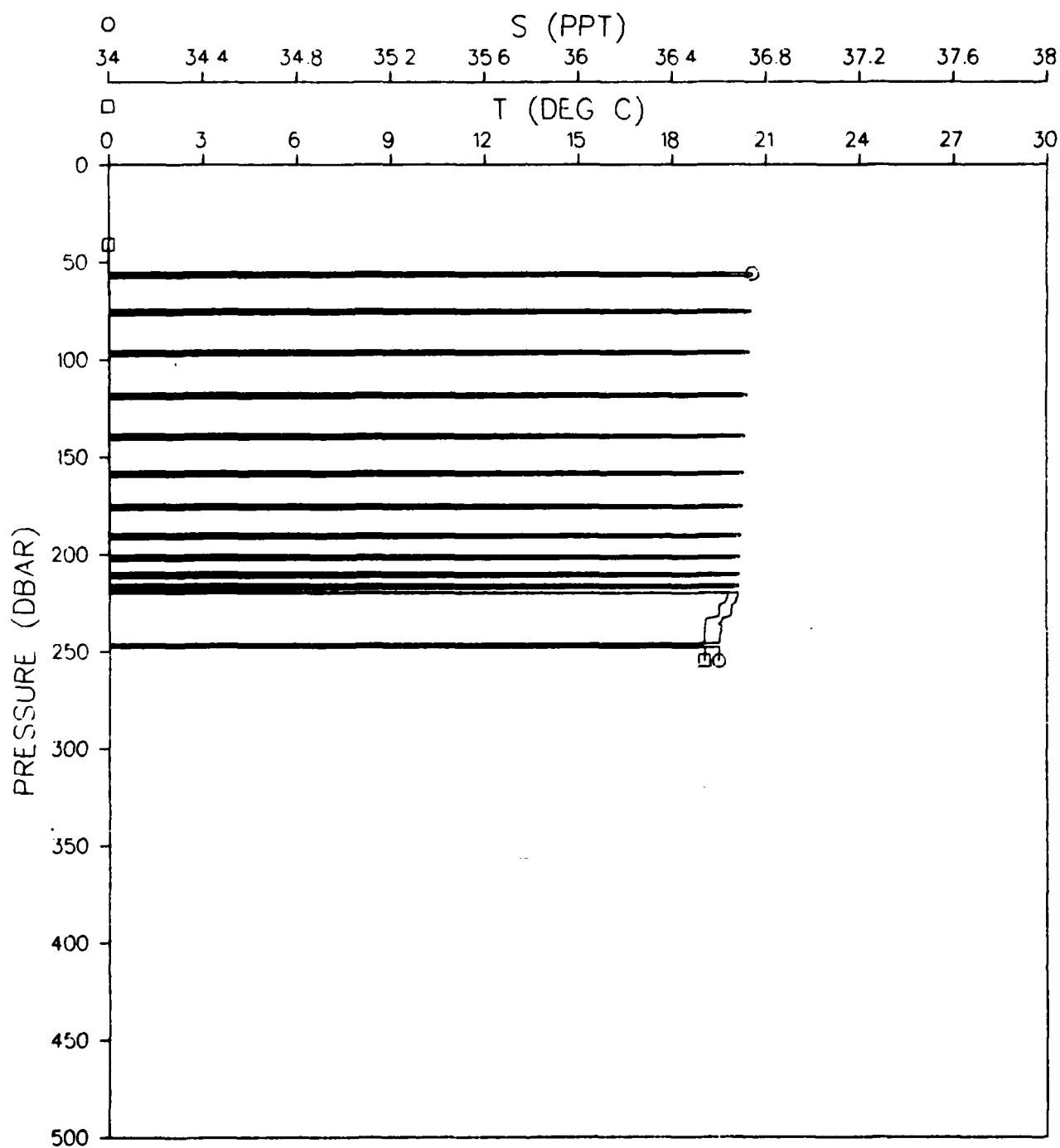


Figure 392.

ATOM 79 RECOVERY
STATION 200024

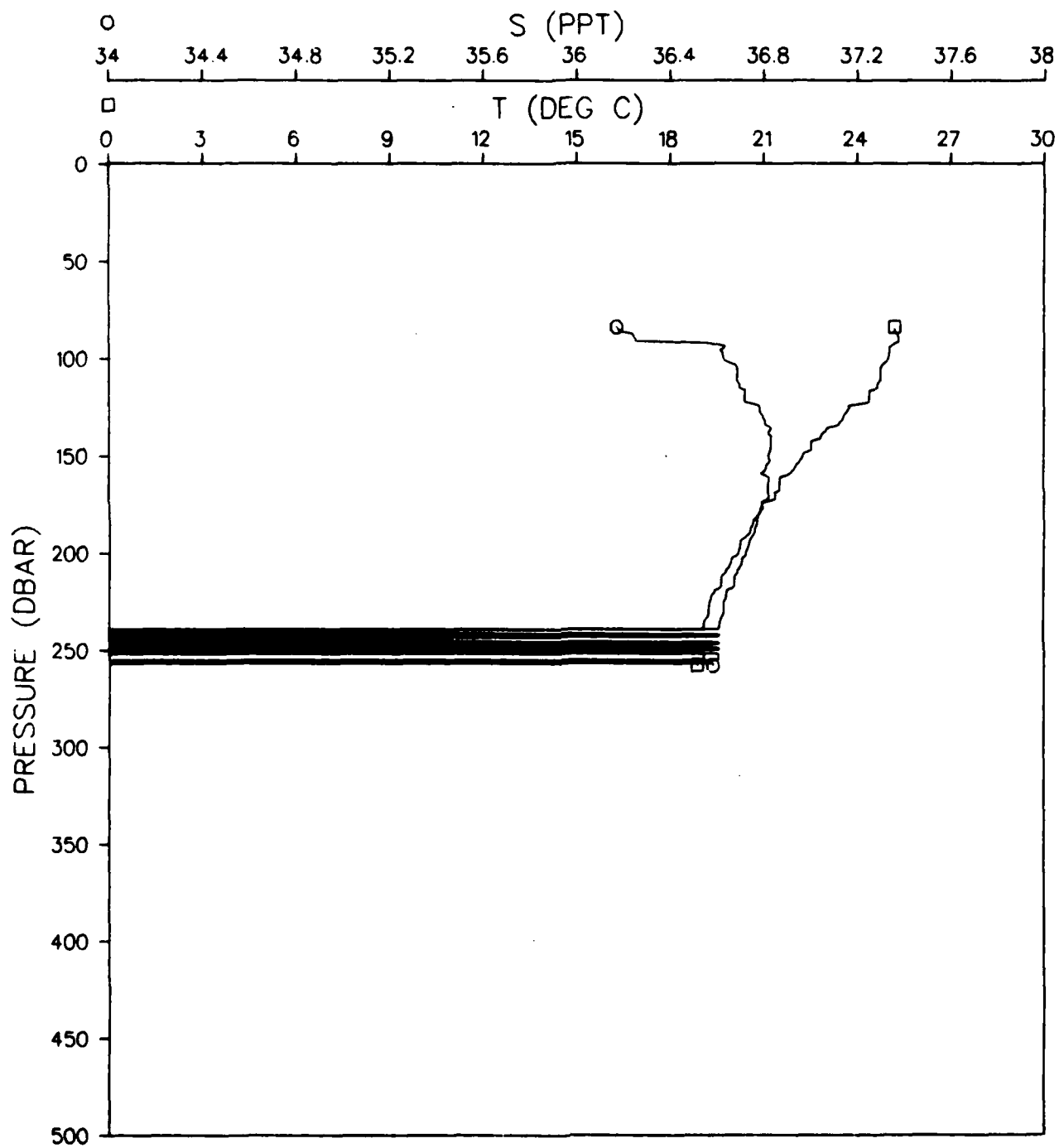


Figure 393.

ATOM 79 RECOVERY
STATION 200025

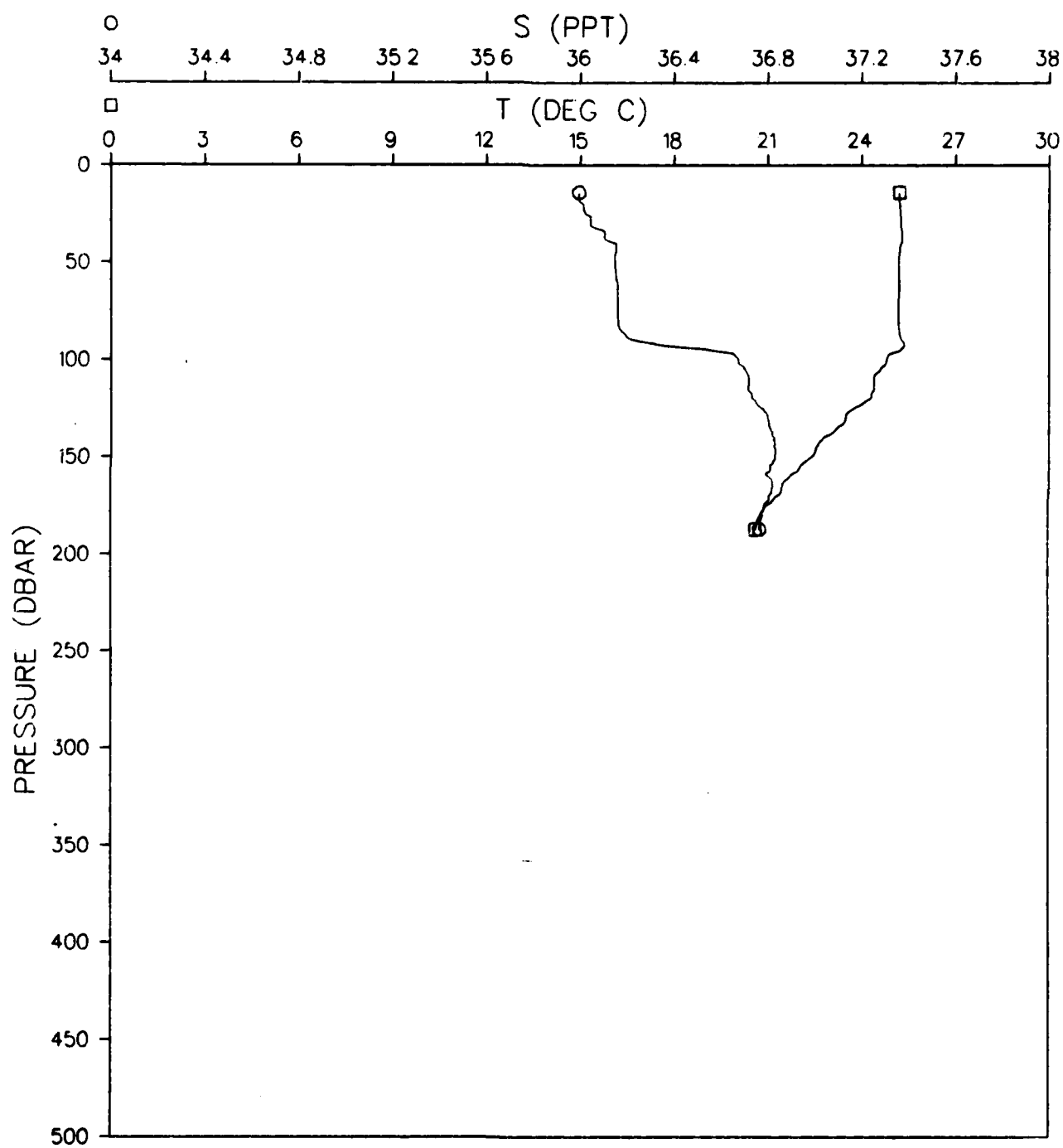


Figure 394.

ATOM 79 RECOVERY
STATION 200026

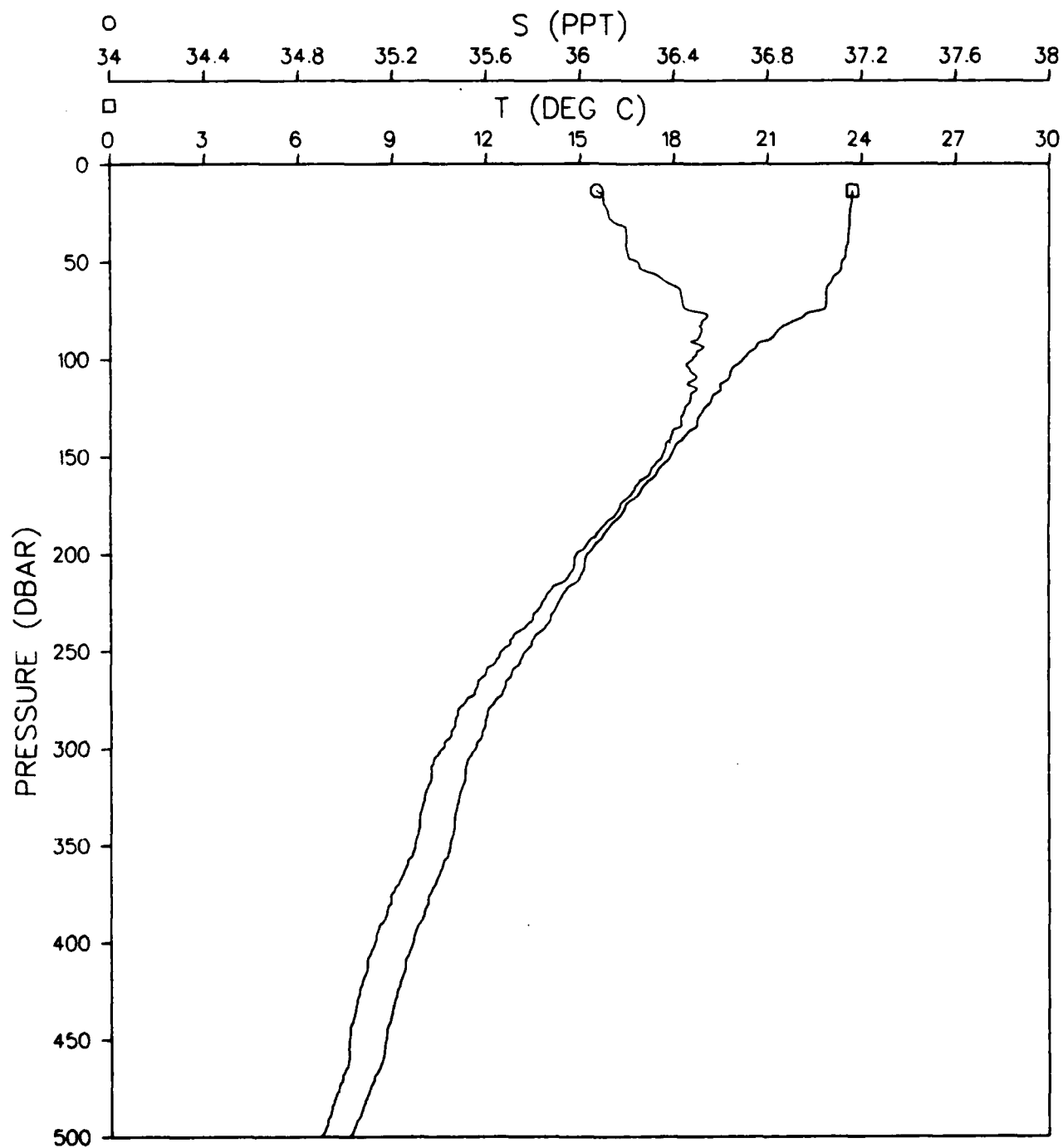


Figure 395.

ATOM 79 RECOVERY
STATION 200027

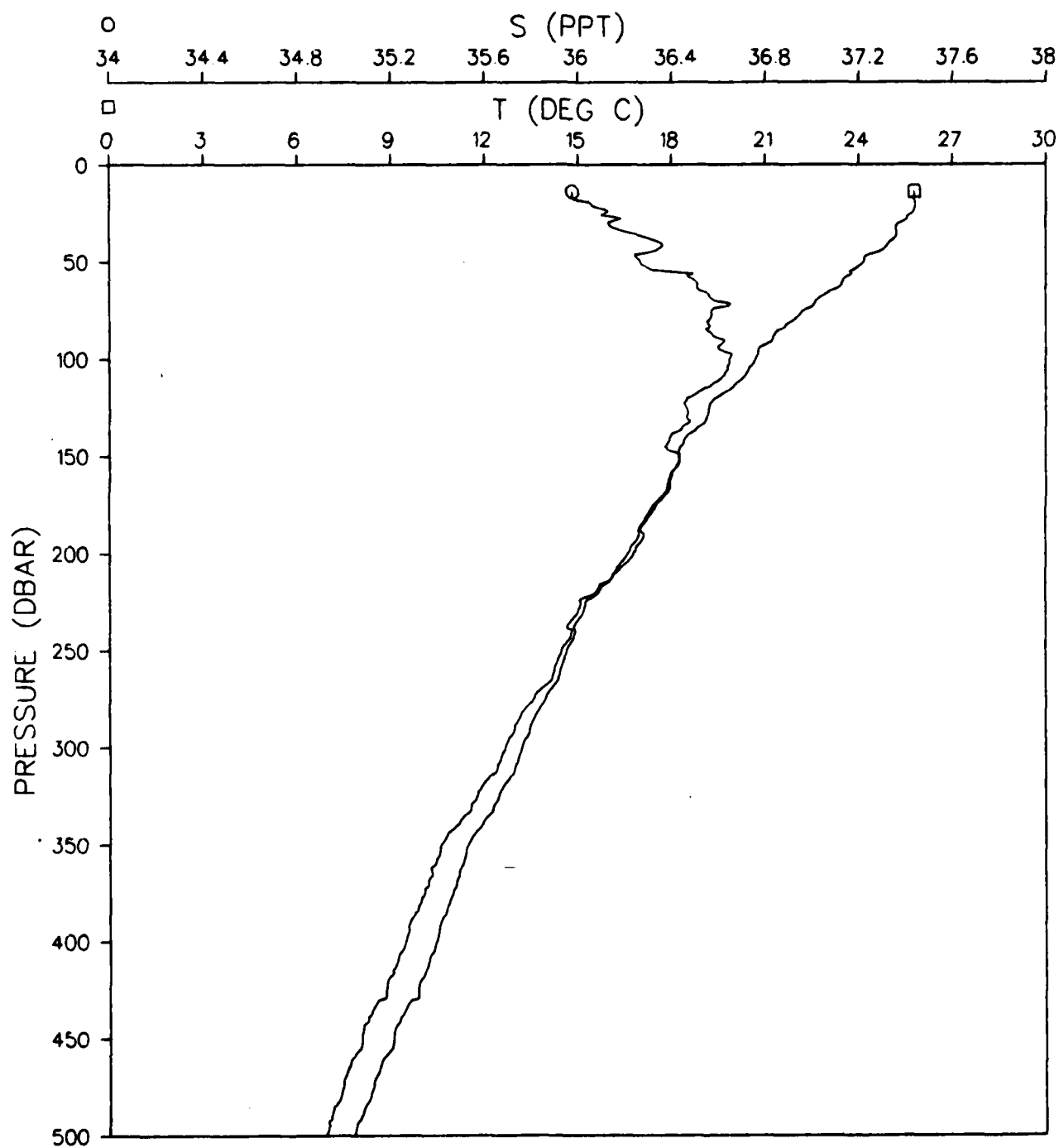


Figure 396.

ATOM 79 RECOVERY
STATION 200028

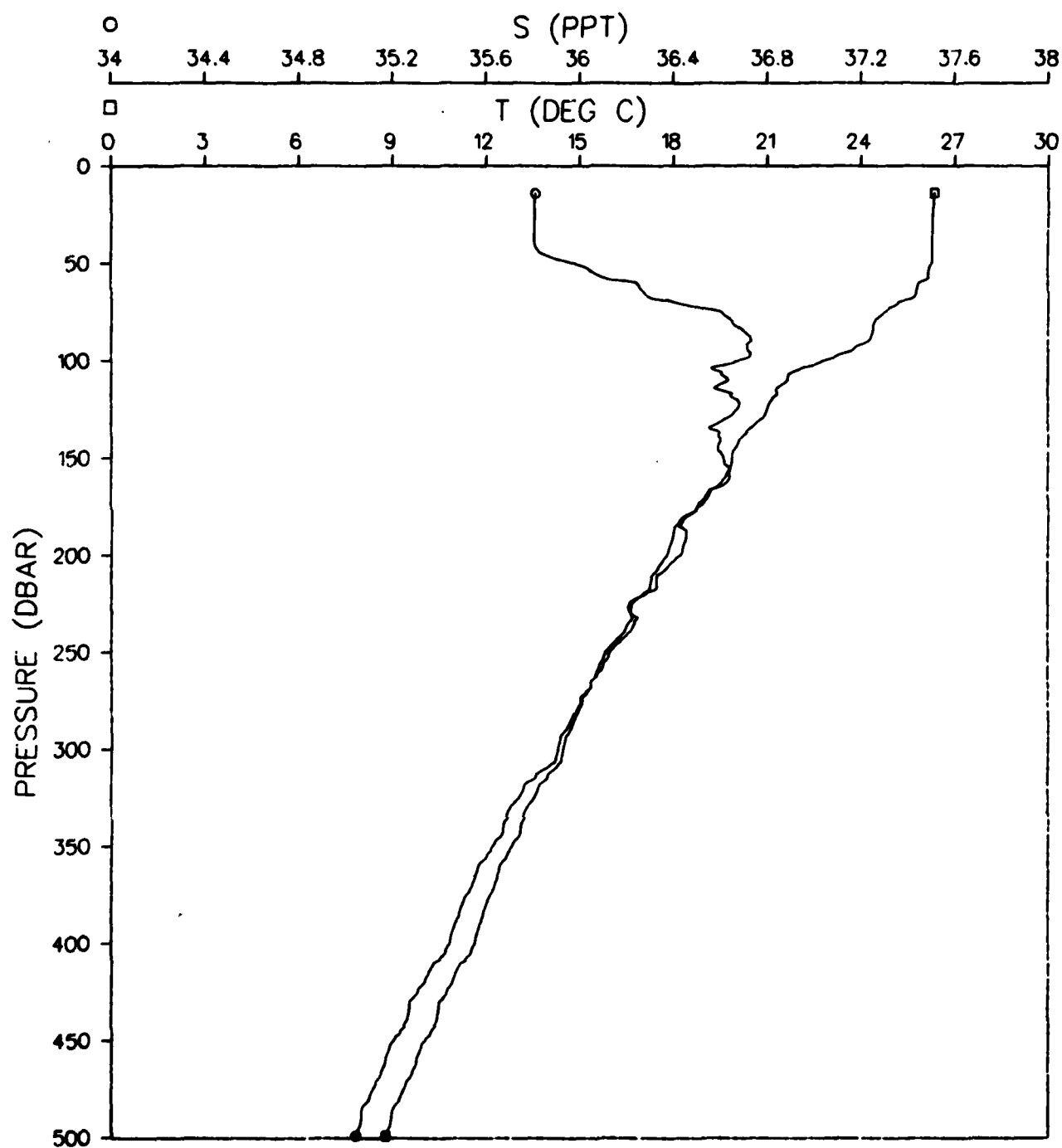


Figure 397.

ATOM 79 RECOVERY
STATION 200029

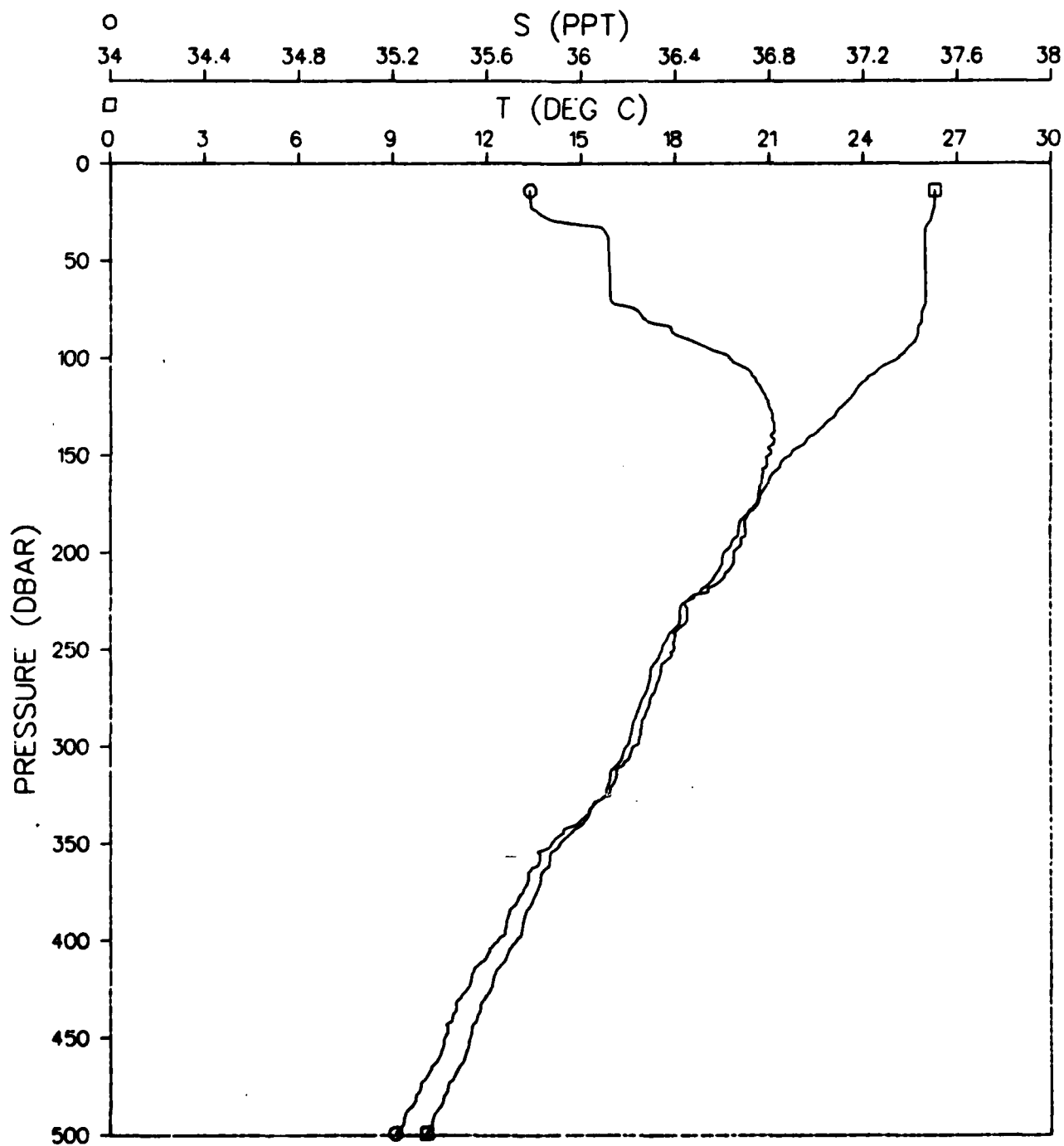


Figure 398.

ATOM 79 RECOVERY
STATION 200030

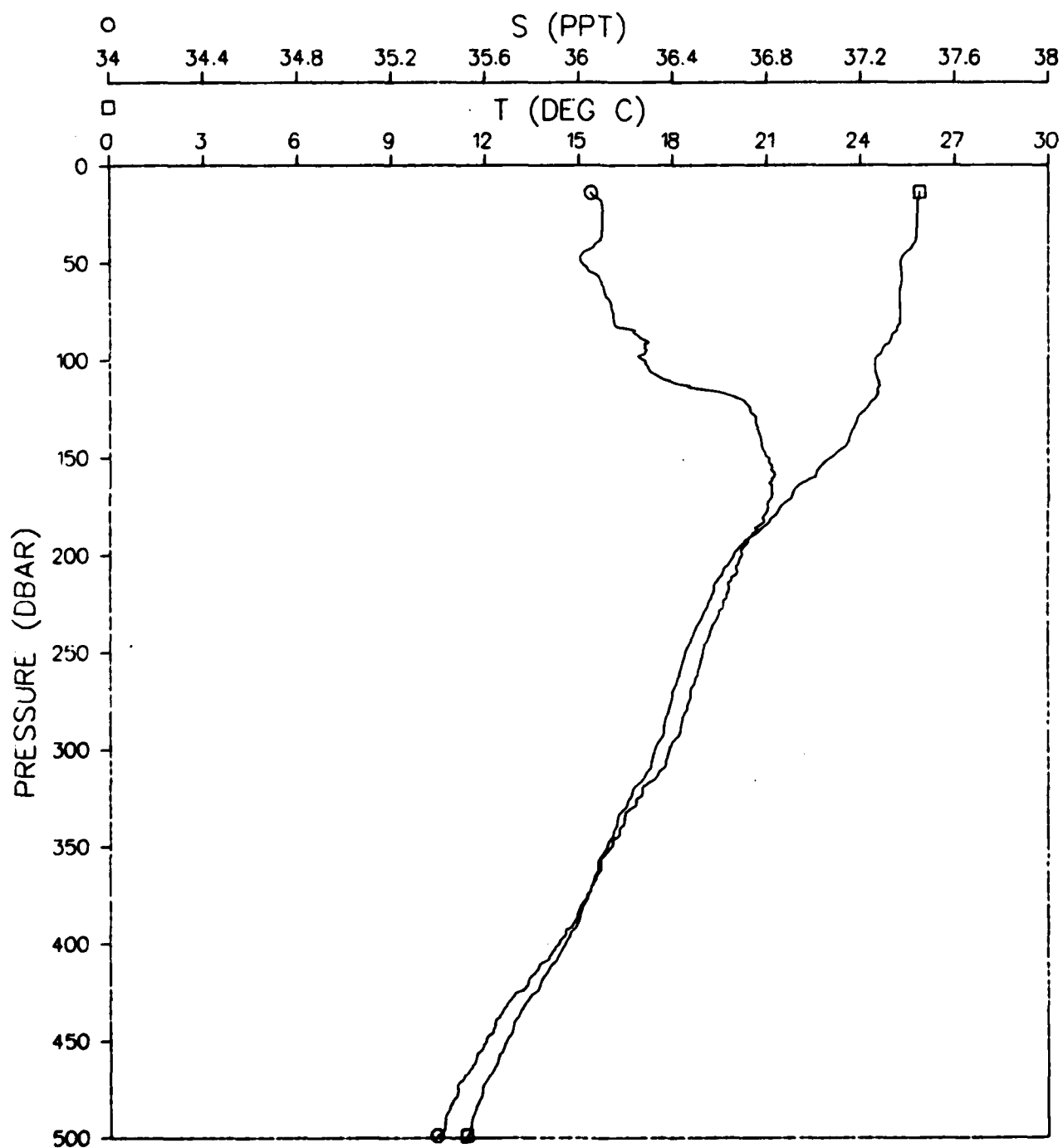


Figure 399.

ATOM 79 RECOVERY
STATION 200031

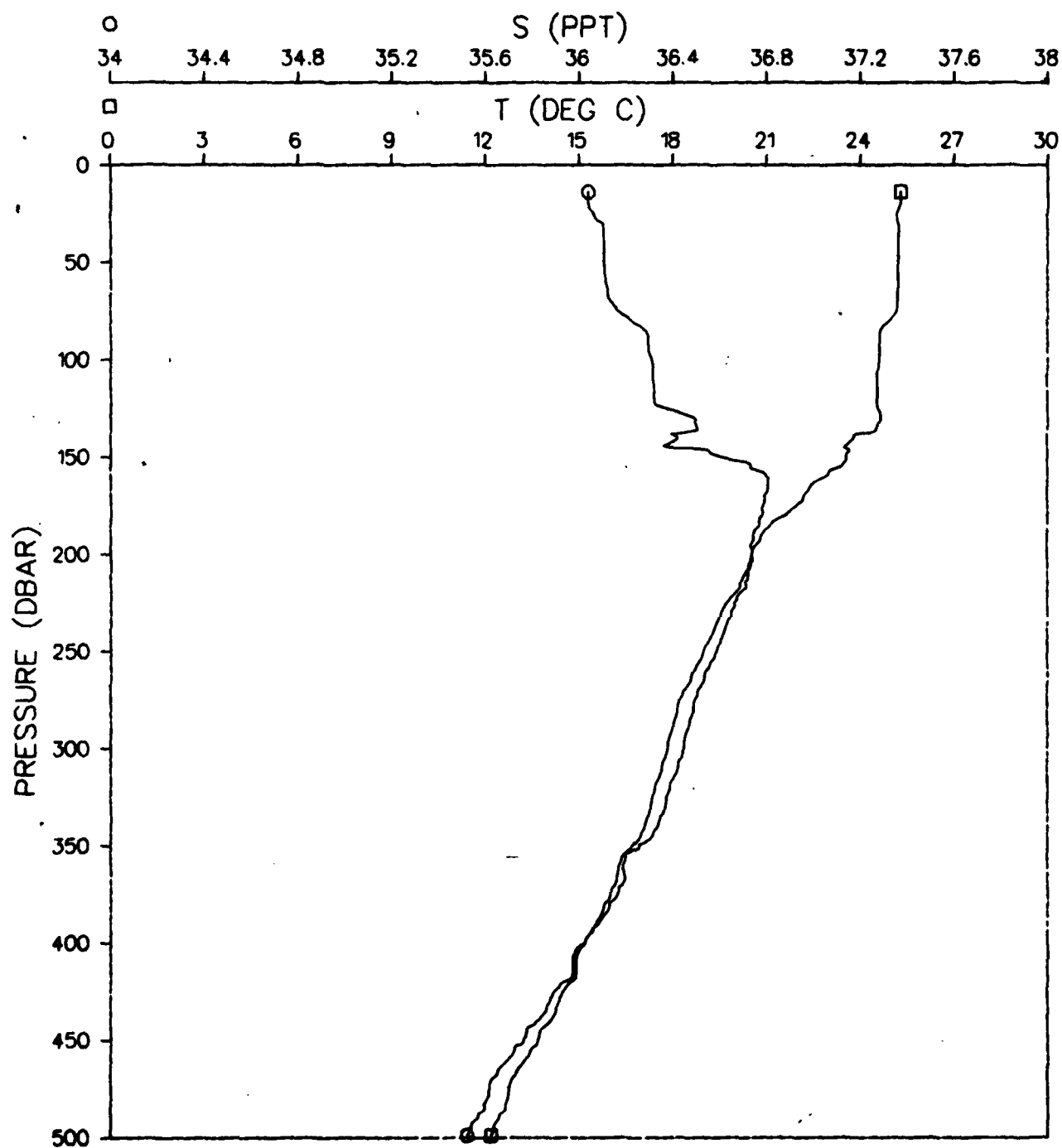


Figure 400.

ATOM 79 RECOVERY
STATION 200032

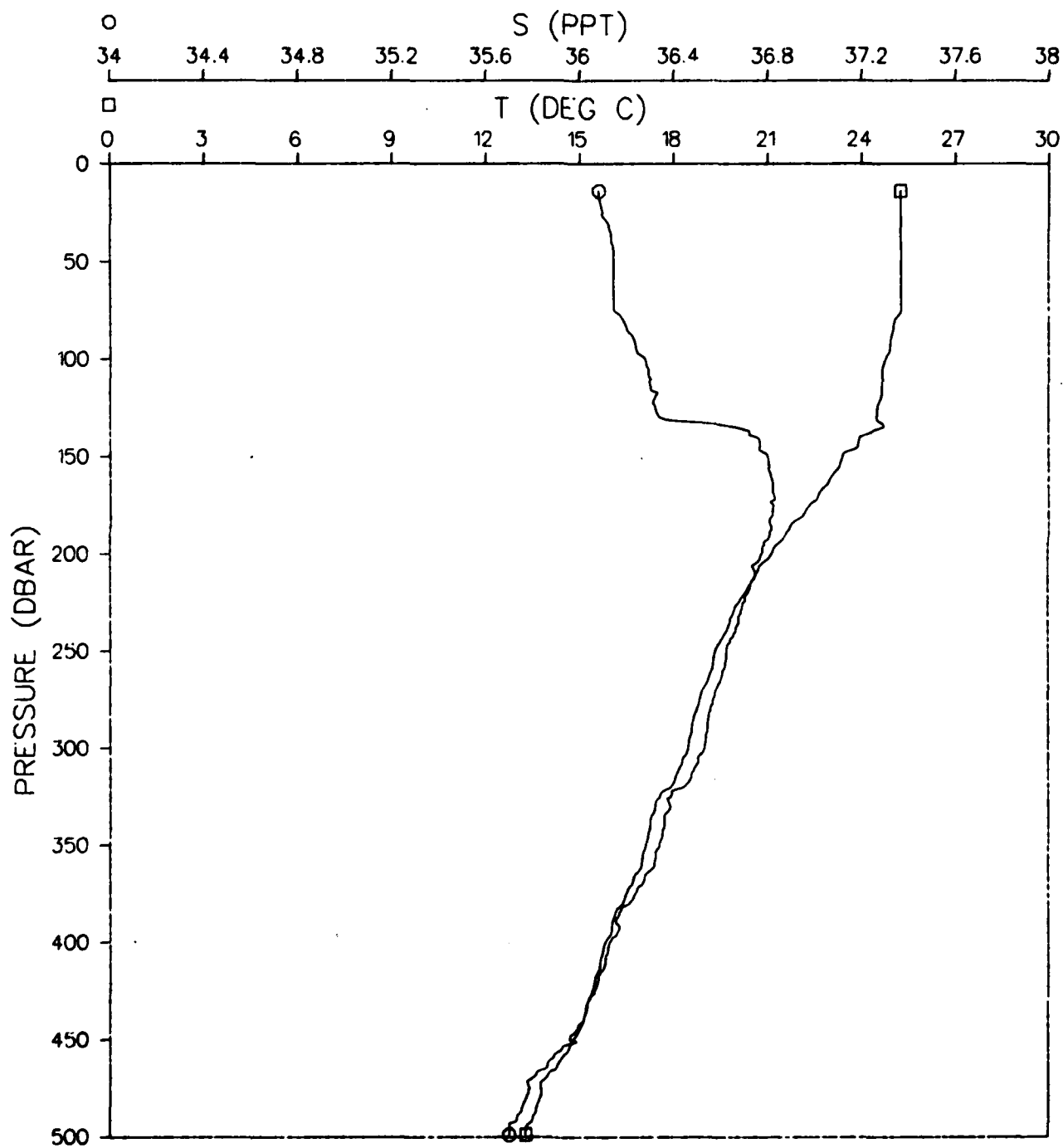


Figure 401.

ATOM 79 RECOVERY
STATION 200033

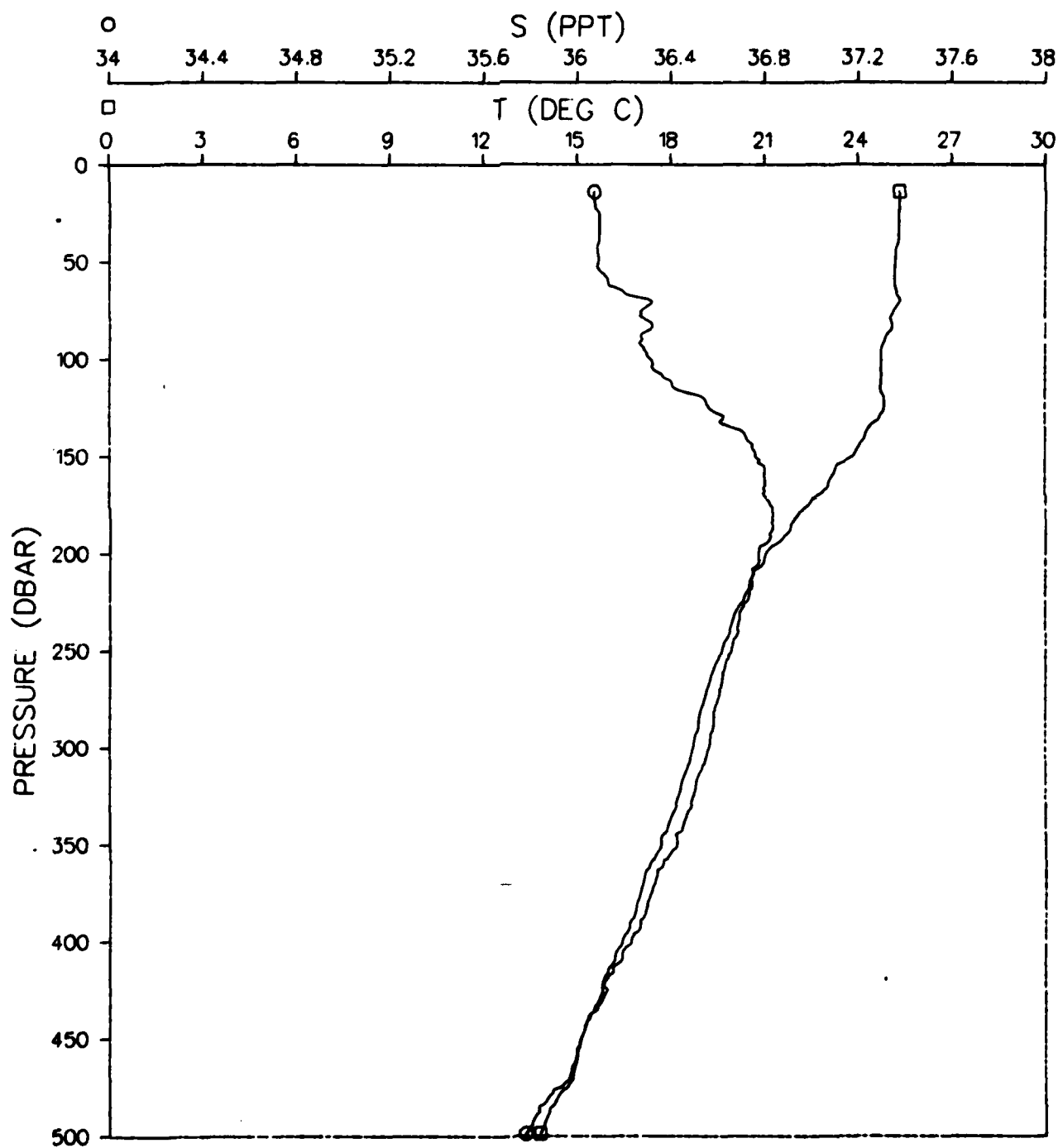


Figure 402.

ATOM 79 RECOVERY
STATION 200034

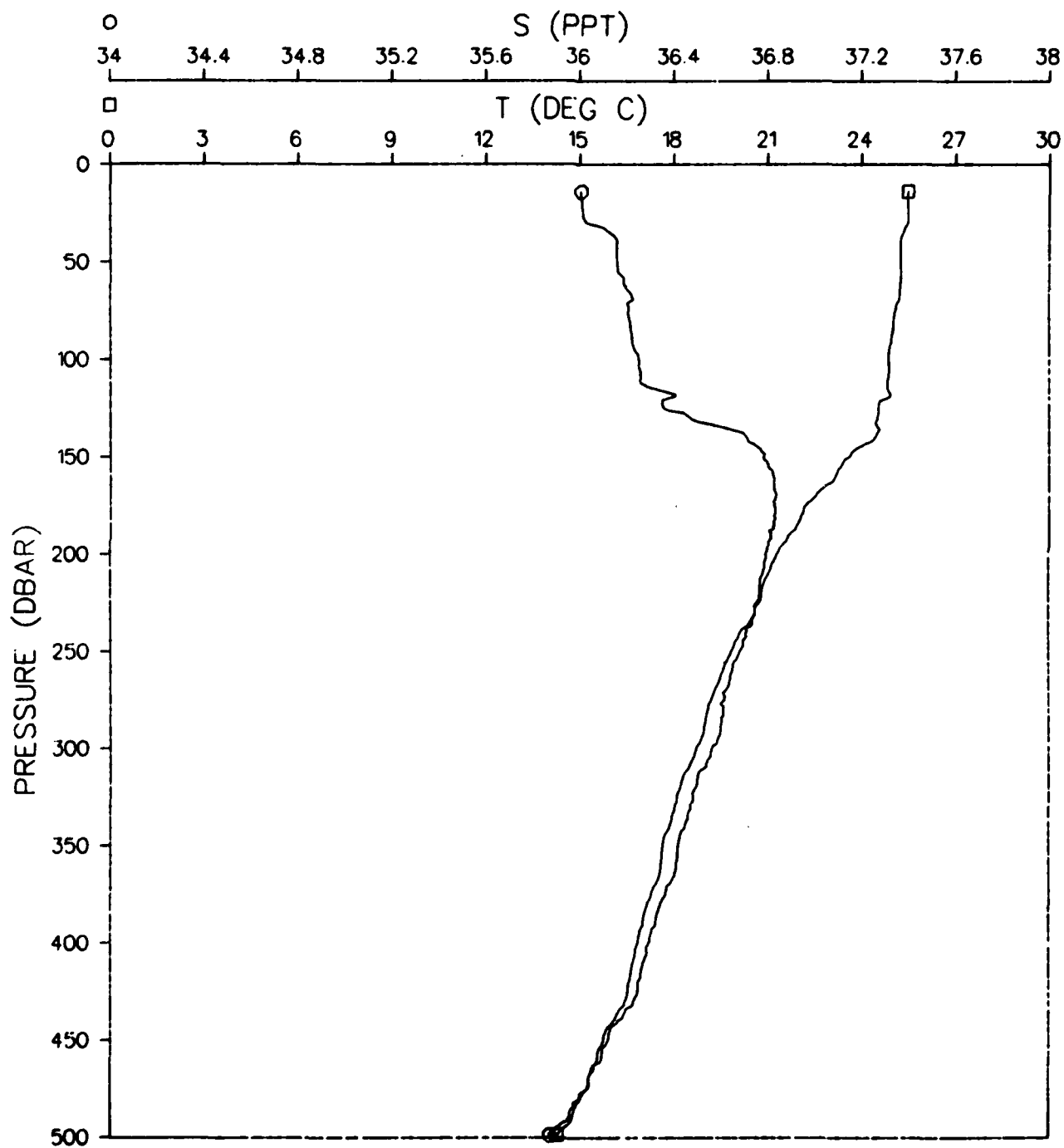


Figure 403.

ATOM 79 RECOVERY
STATION 200035

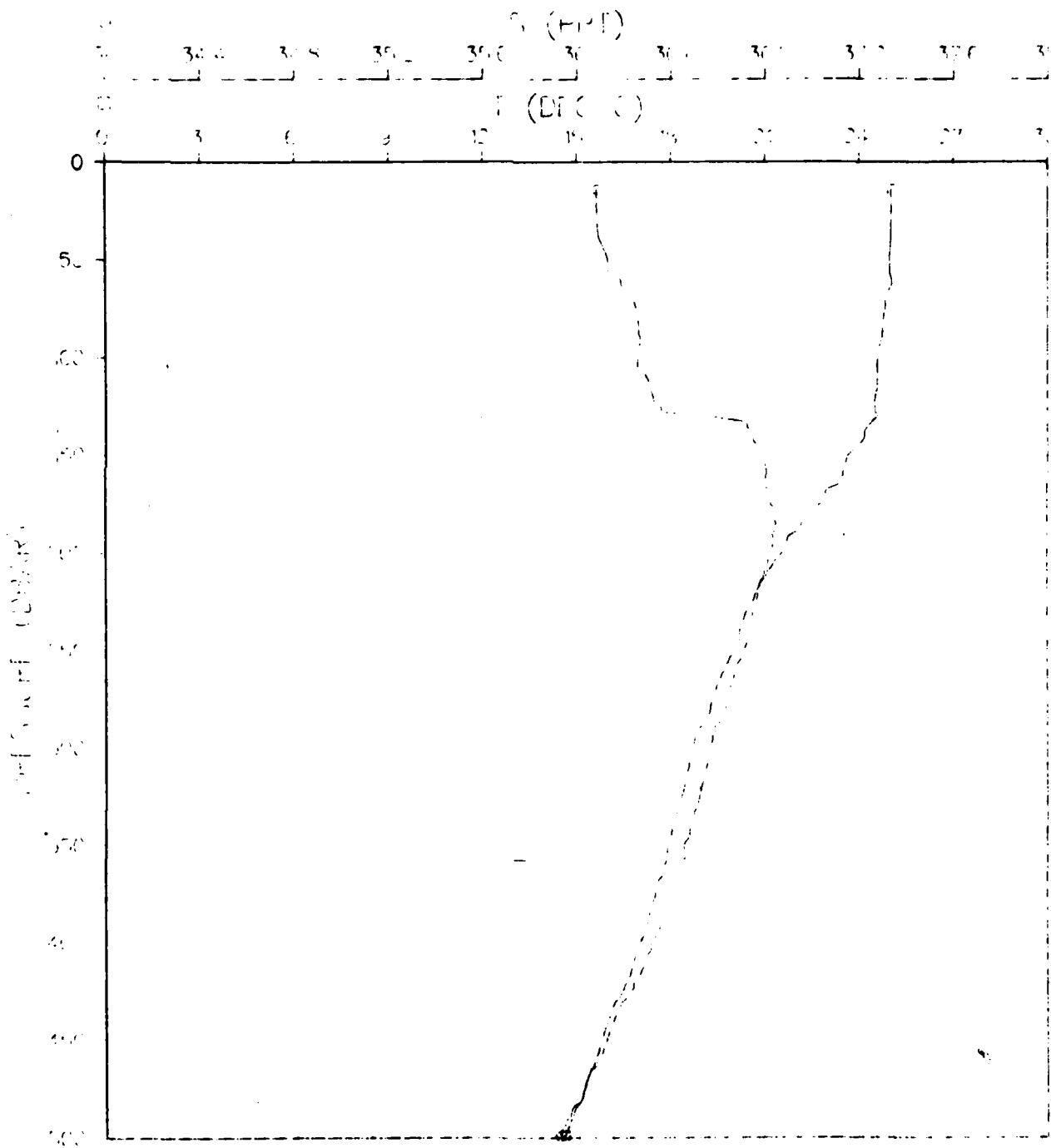


Figure 404.

ATOM 79 RECOVERY STATION 200036

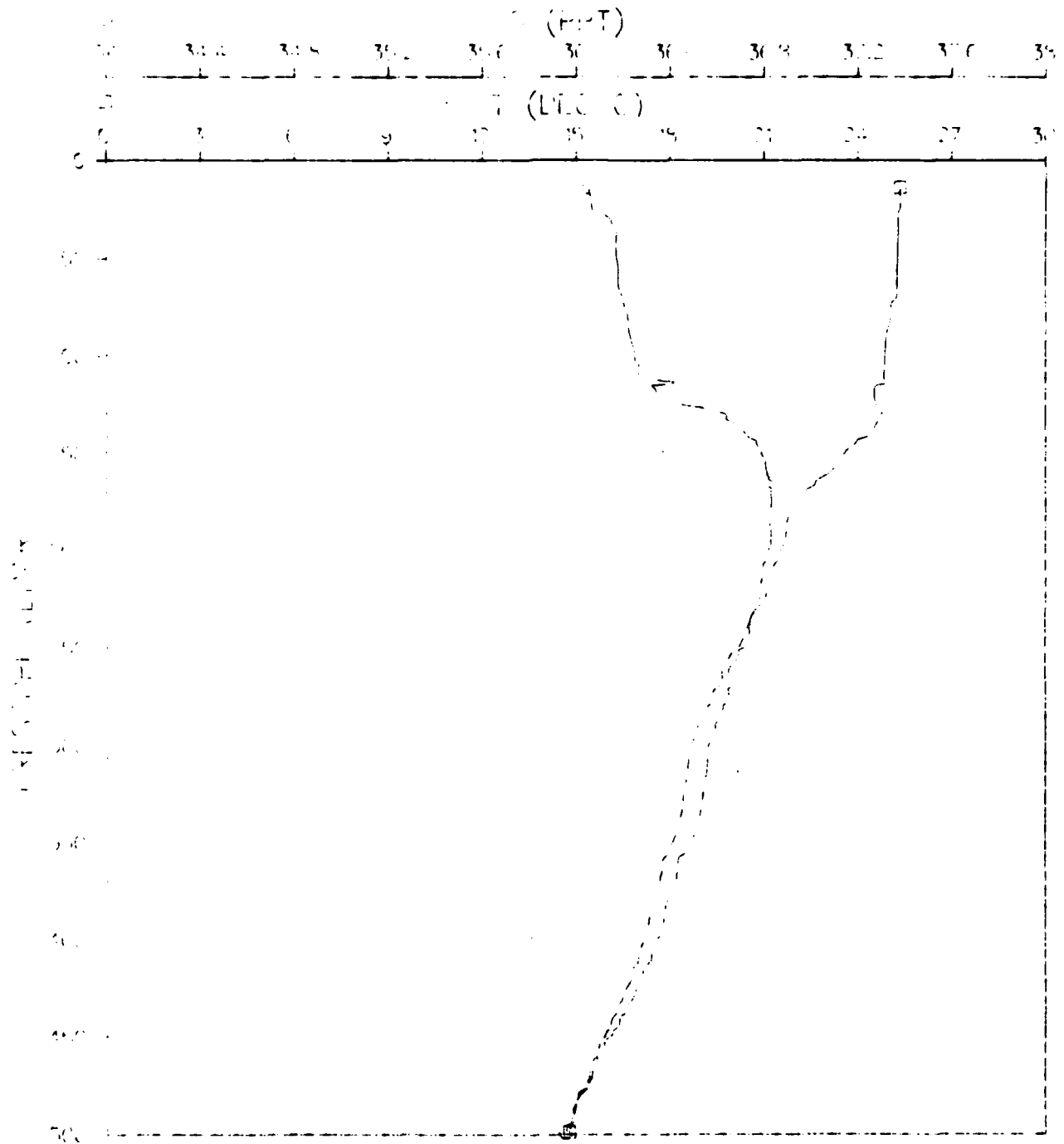


Figure 405.

ATOM 79 RECOVERY
STATION 200037

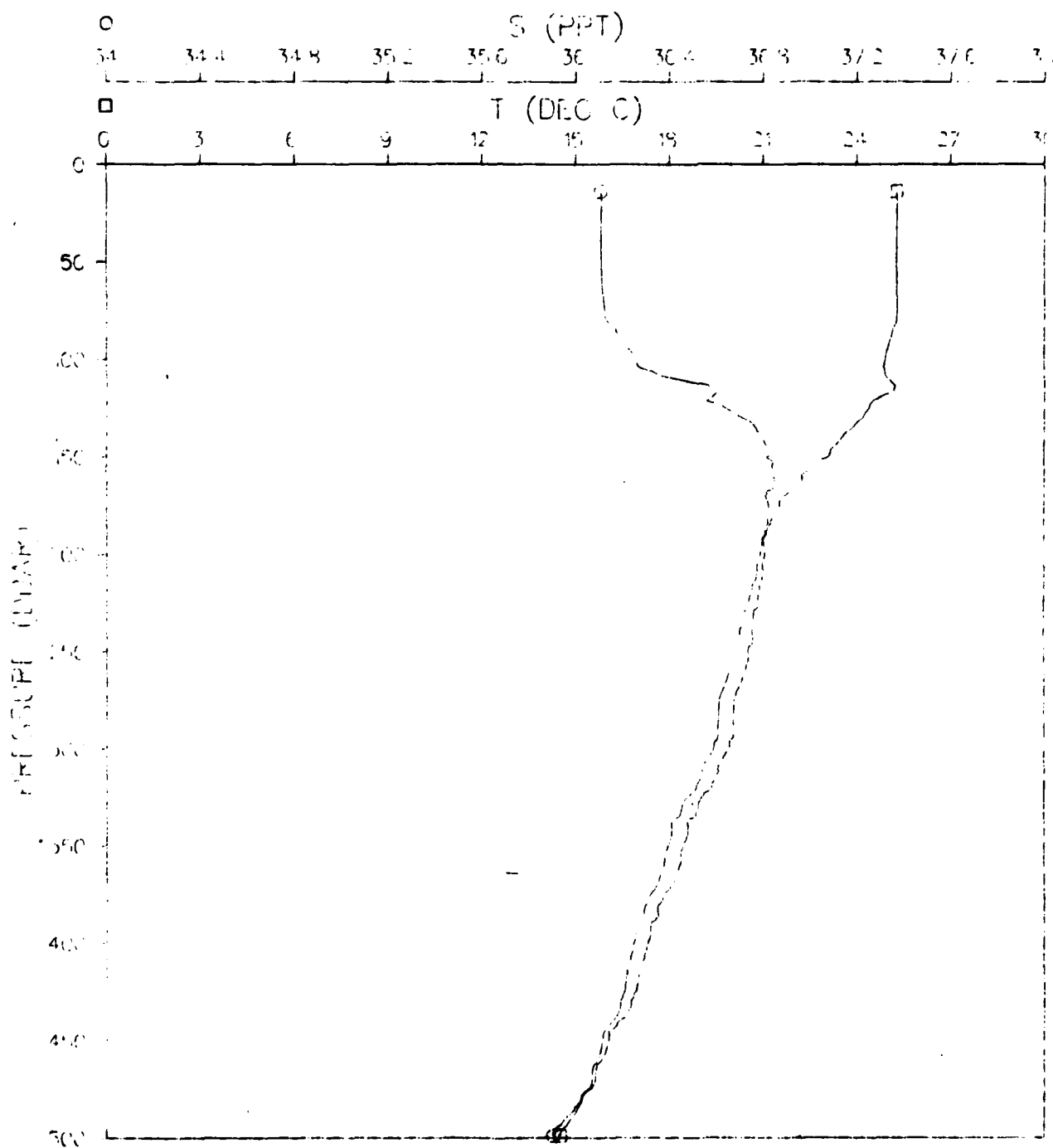


Figure 406.

ATOM 79 RECOVERY STATION 200038

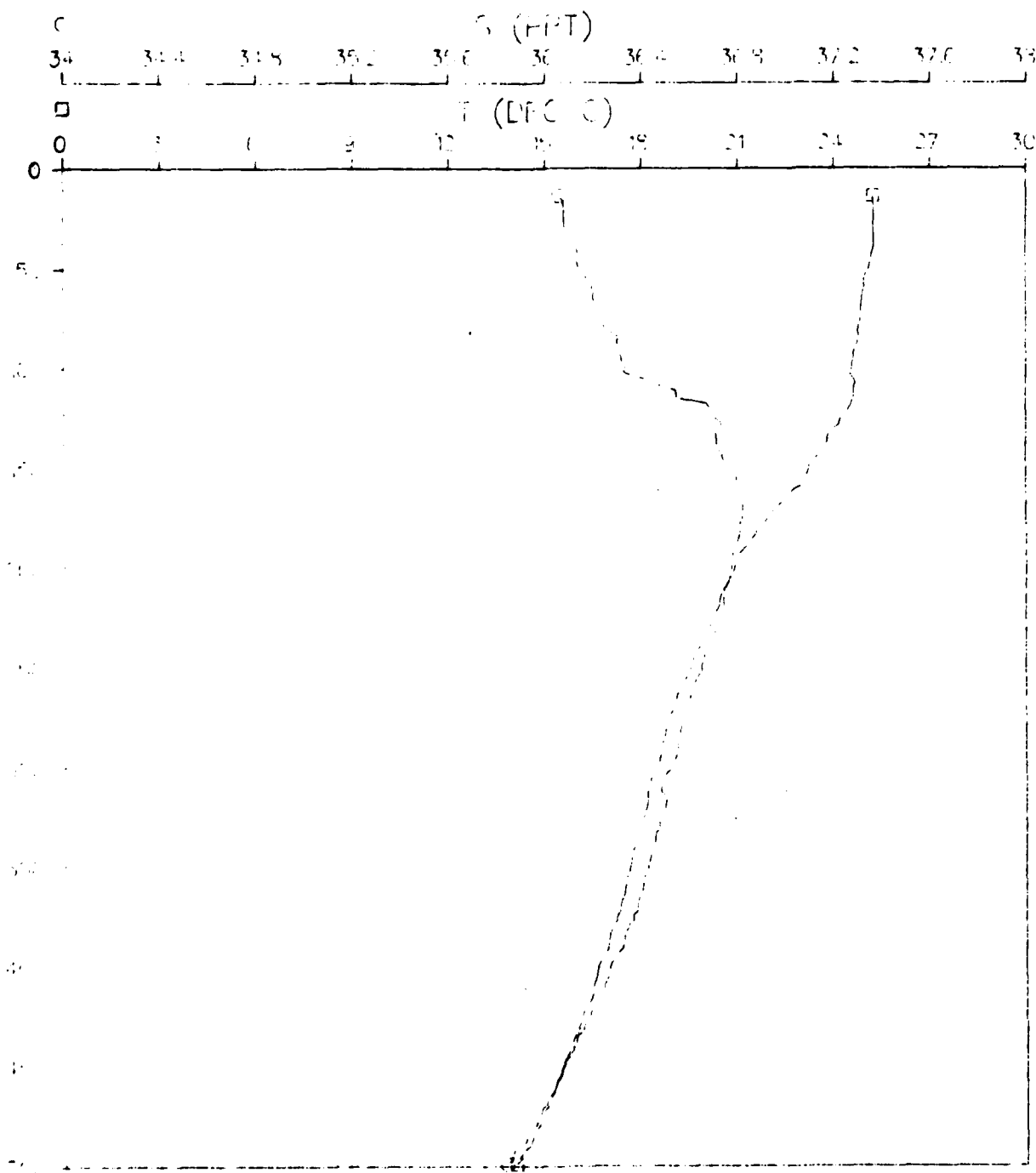


Figure 407.

ATOM 79 RECOVERY
STATION 200039

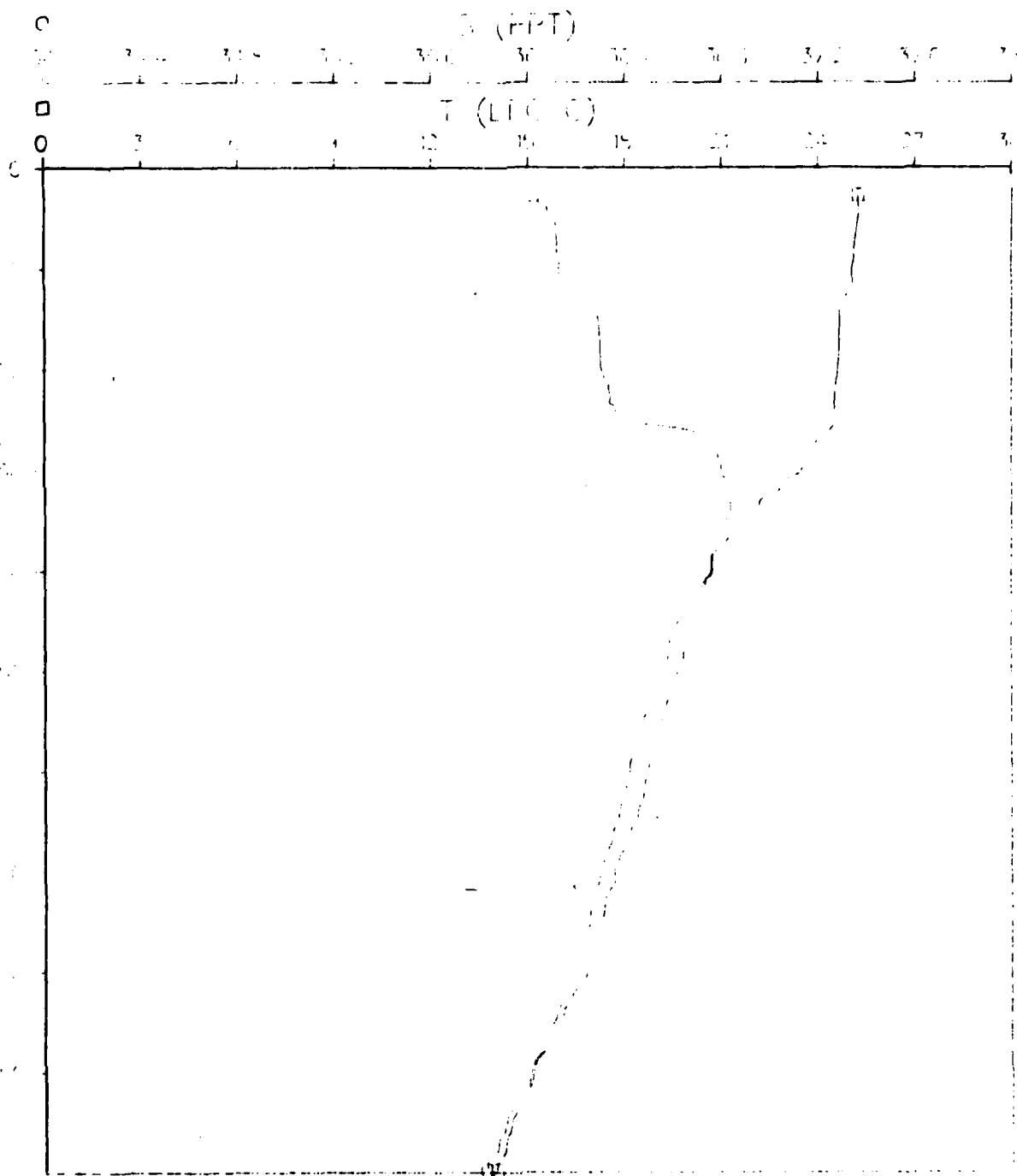


Figure 408.

ATOM 79 RECOVERY STATION 200040

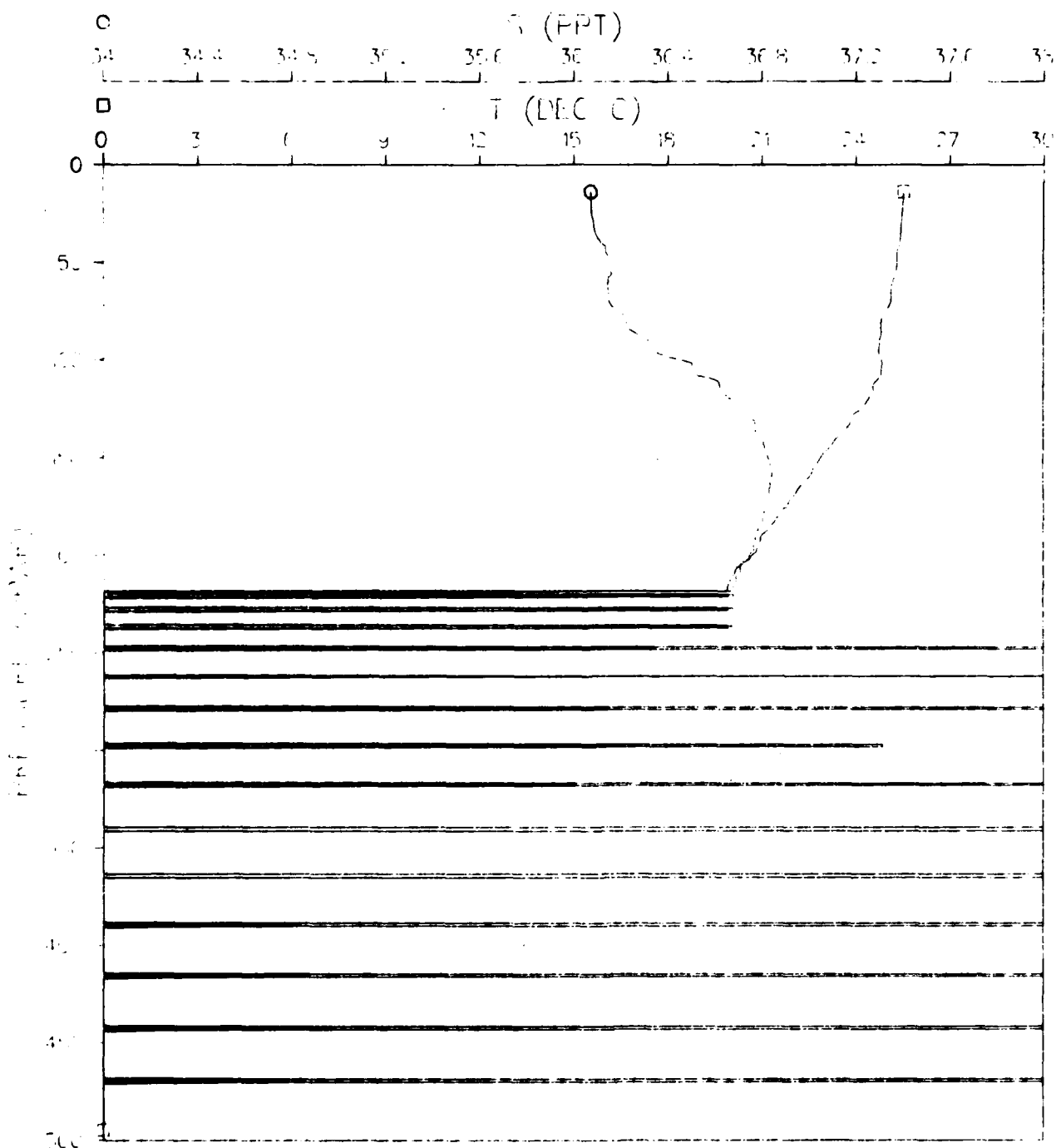


Figure 409.

ATOM 79 RECOVERY
STATION 200001

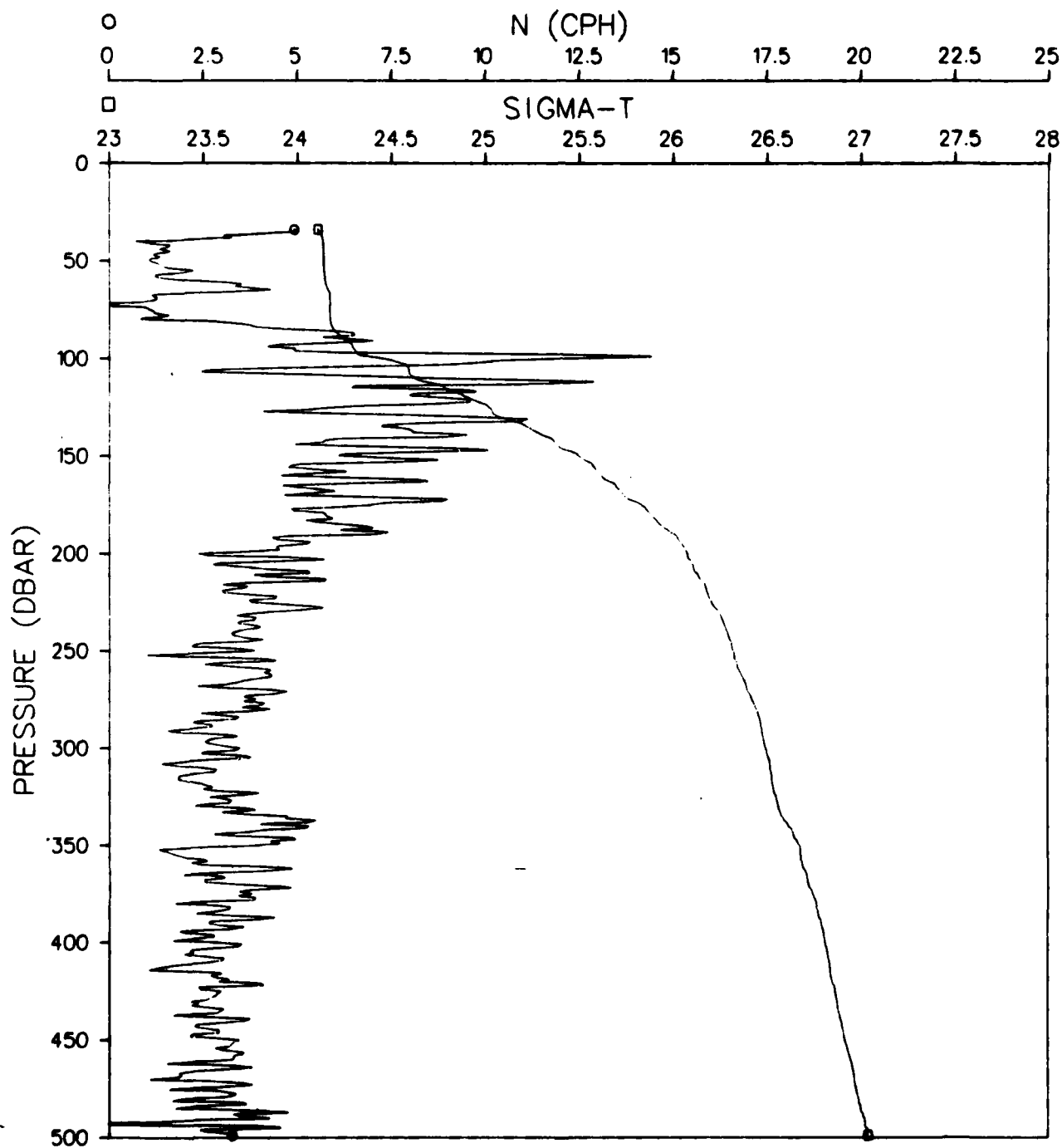


Figure 410.

ATOM 79 RECOVERY
STATION 200002

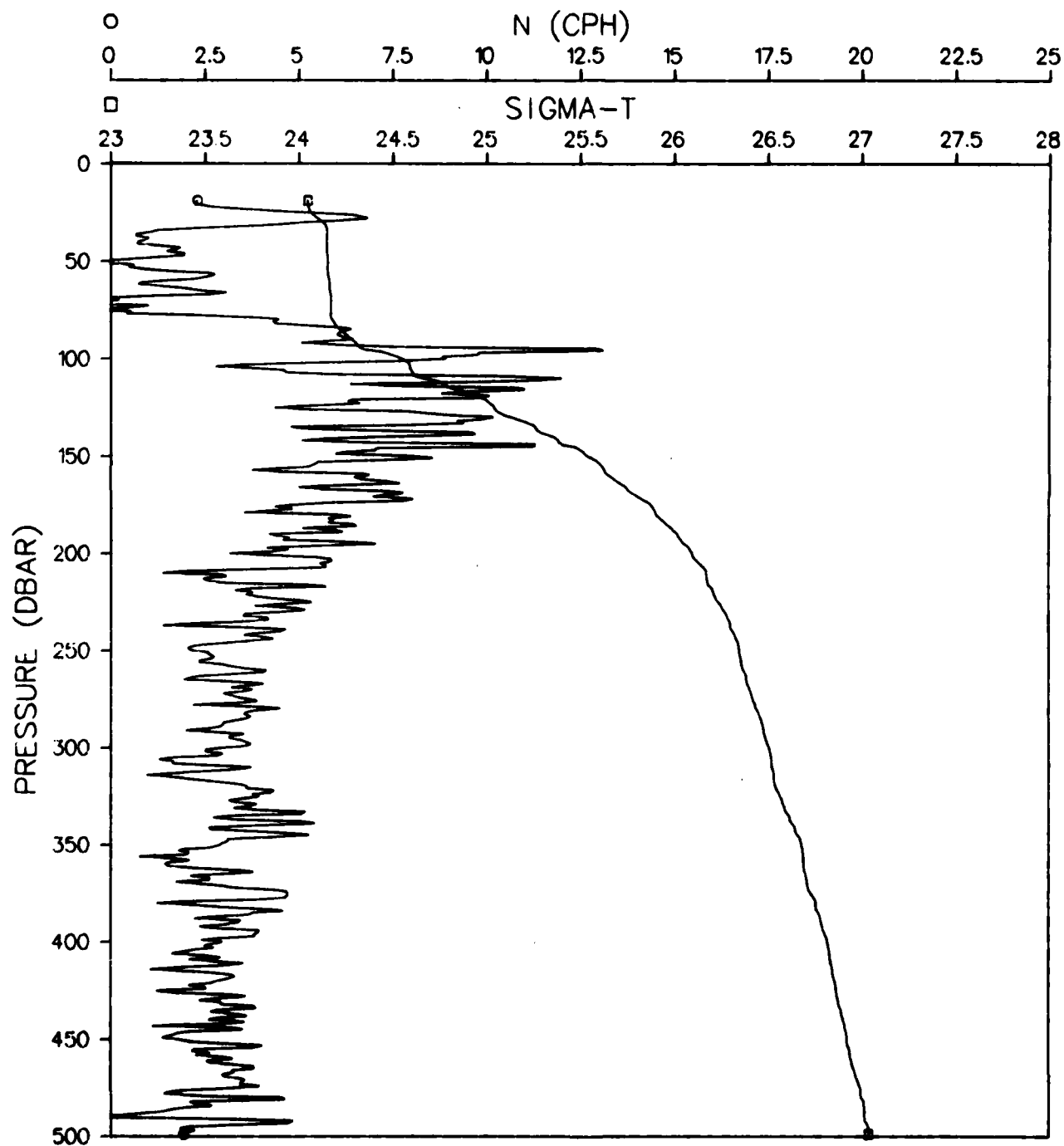


Figure 411.

ATOM 79 RECOVERY
STATION 200003

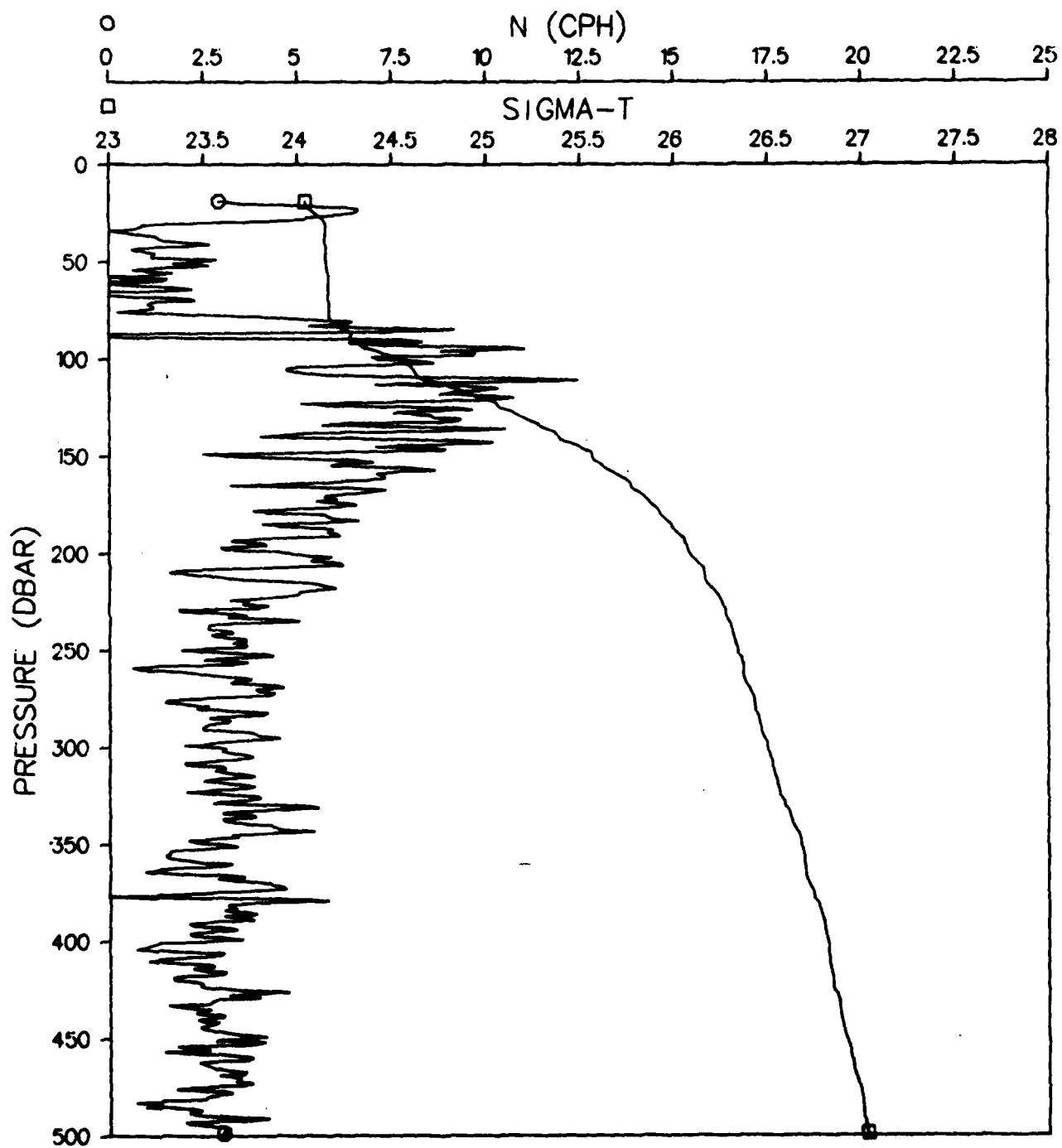


Figure 412.

ATOM 79 RECOVERY
STATION 200004

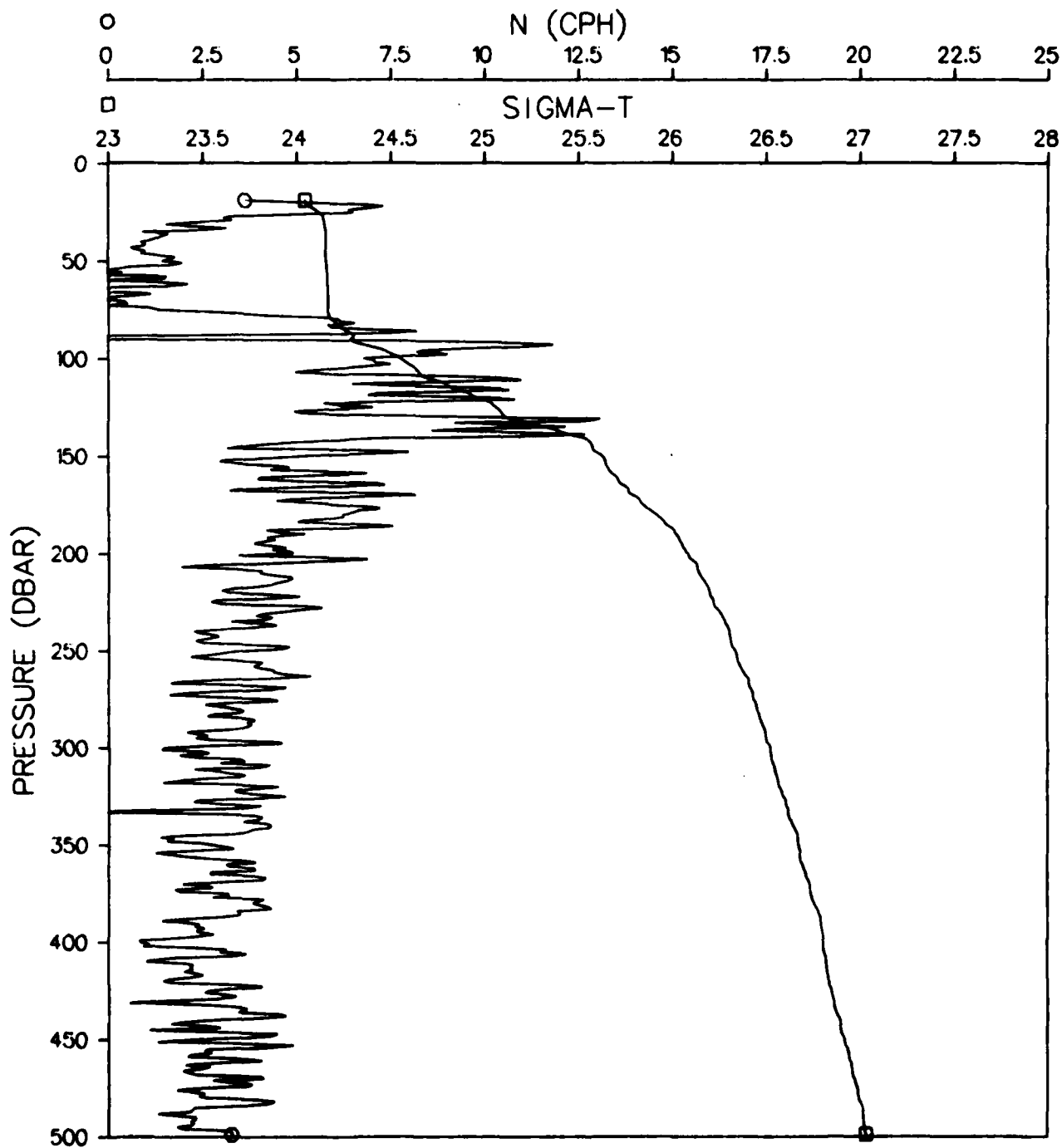


Figure 413.

ATOM 79 RECOVERY
STATION 200005

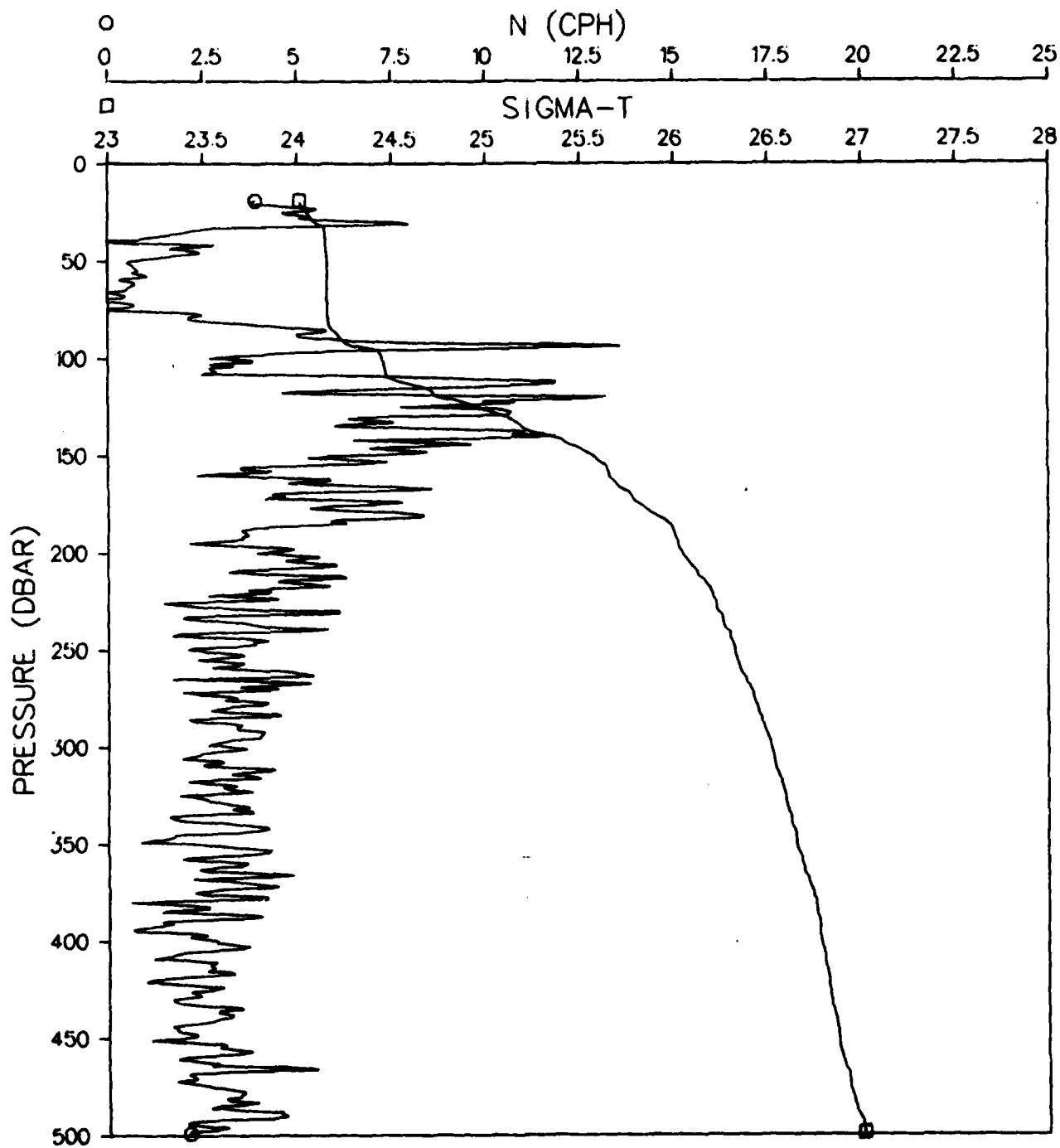


Figure 414.

ATOM 79 RECOVERY
STATION 200006

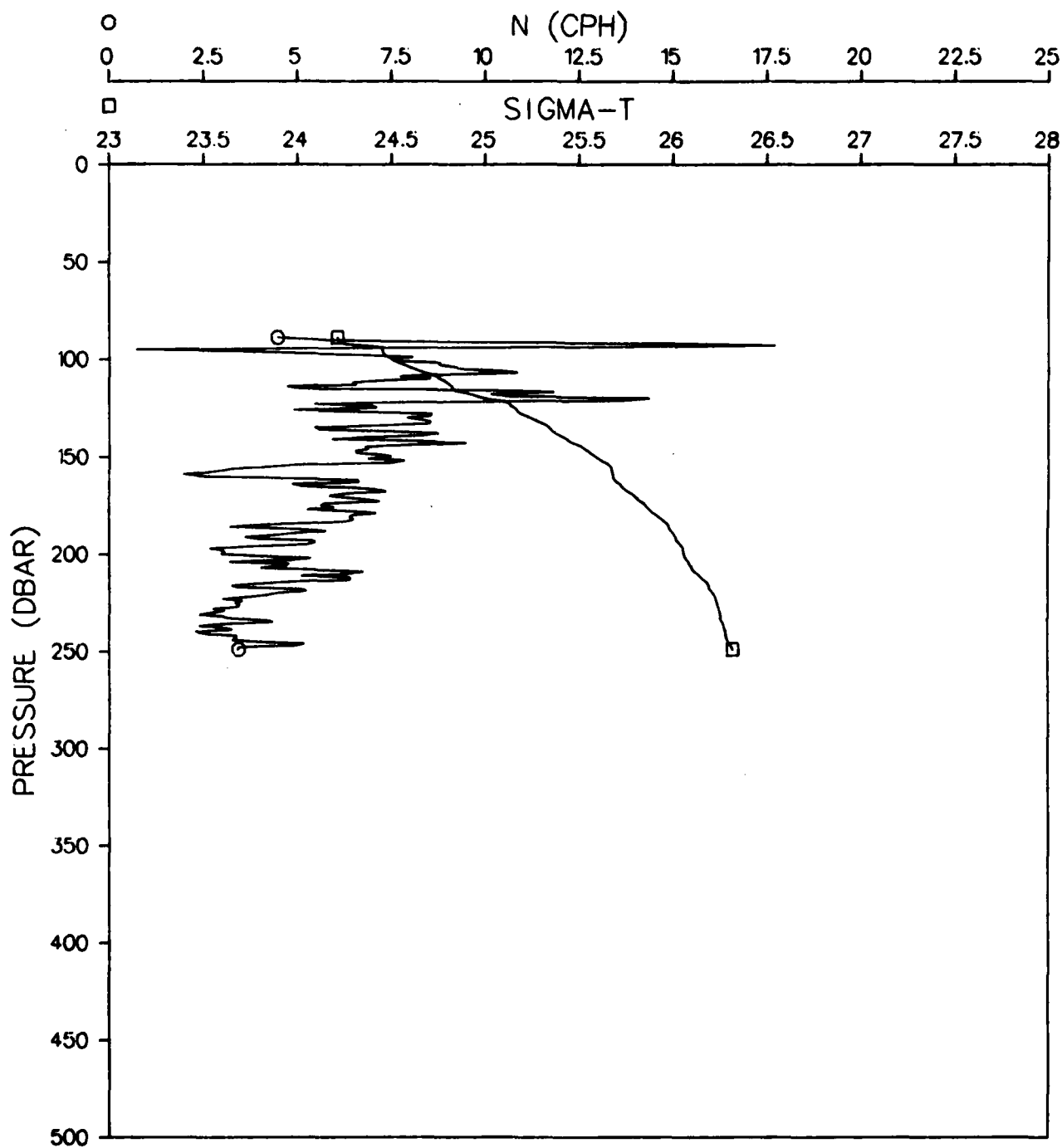


Figure 415.

ATOM 79 RECOVERY
STATION 200007

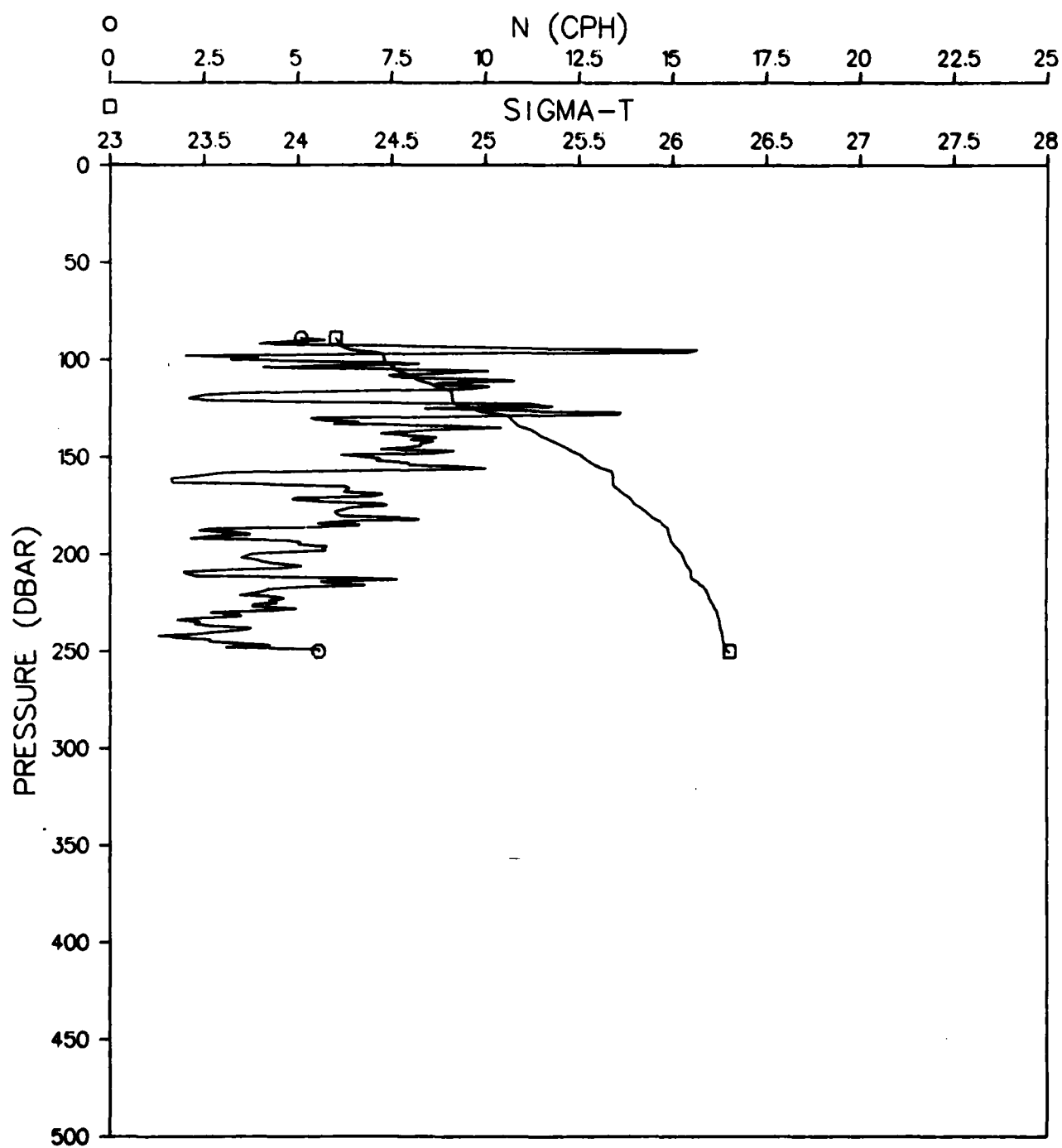


Figure 416.

ATOM 79 RECOVERY
STATION 200008

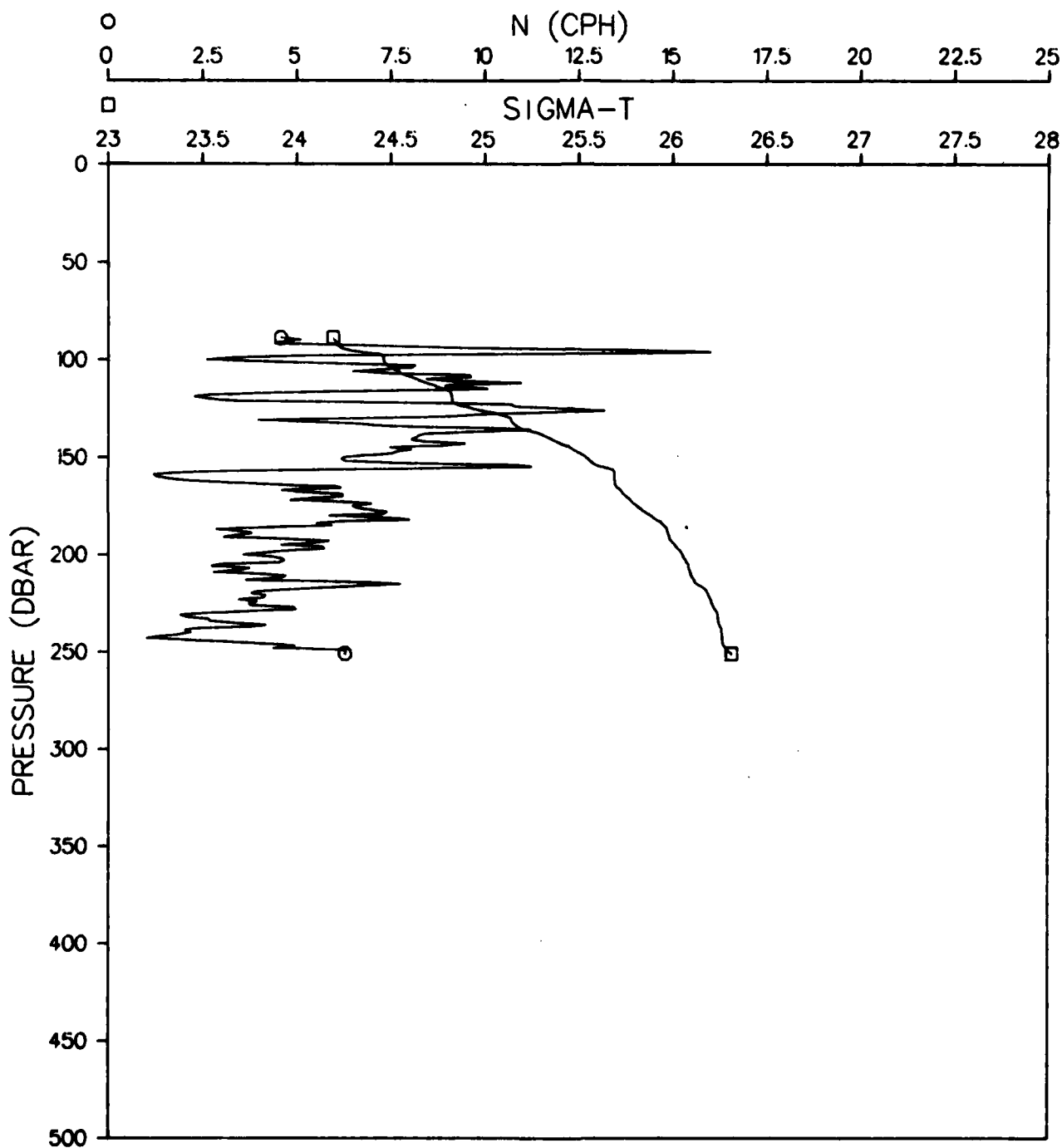


Figure 417.

ATOM 79 RECOVERY
STATION 200009

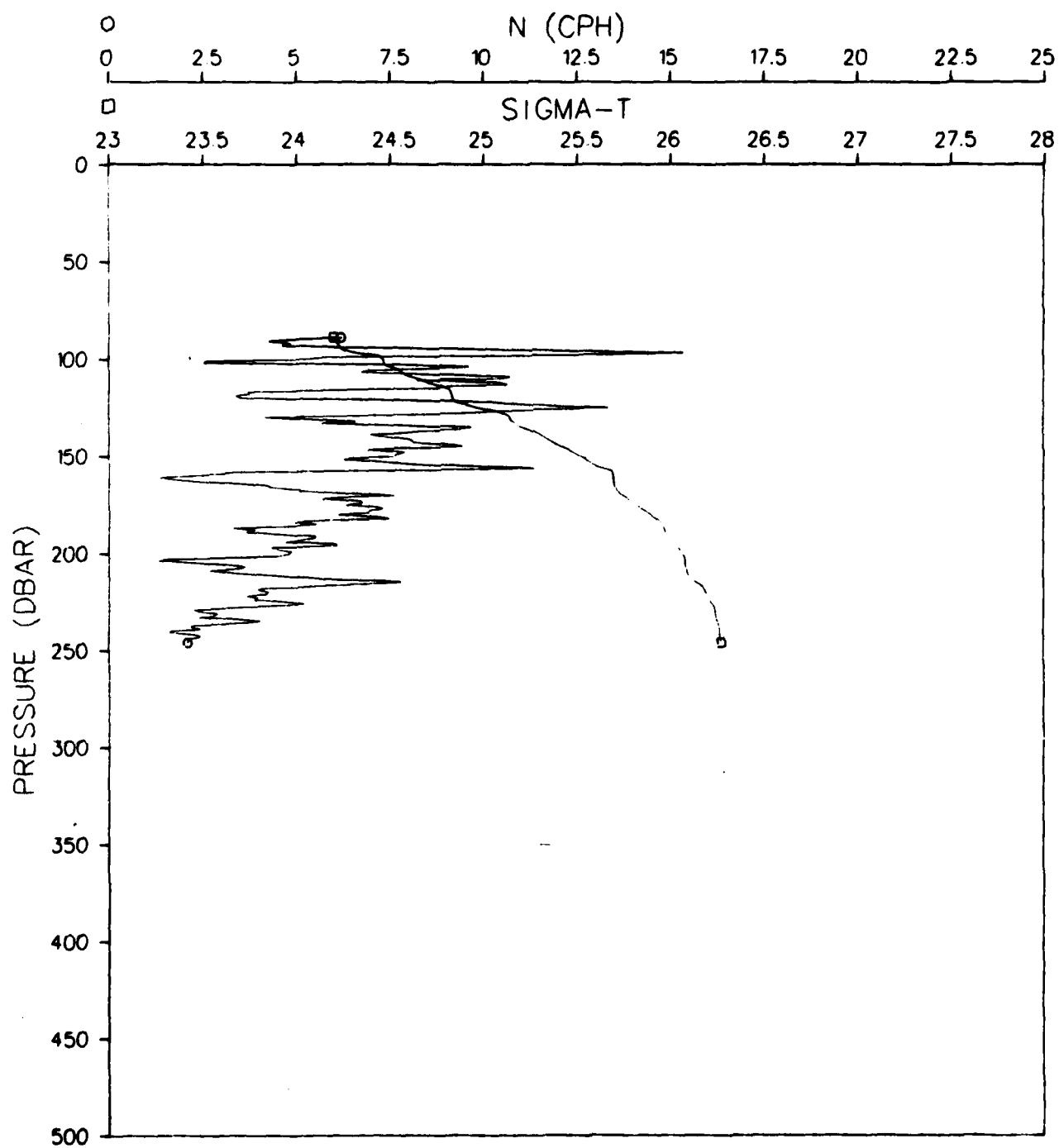


Figure 418.

ATOM 79 RECOVERY
STATION 200010

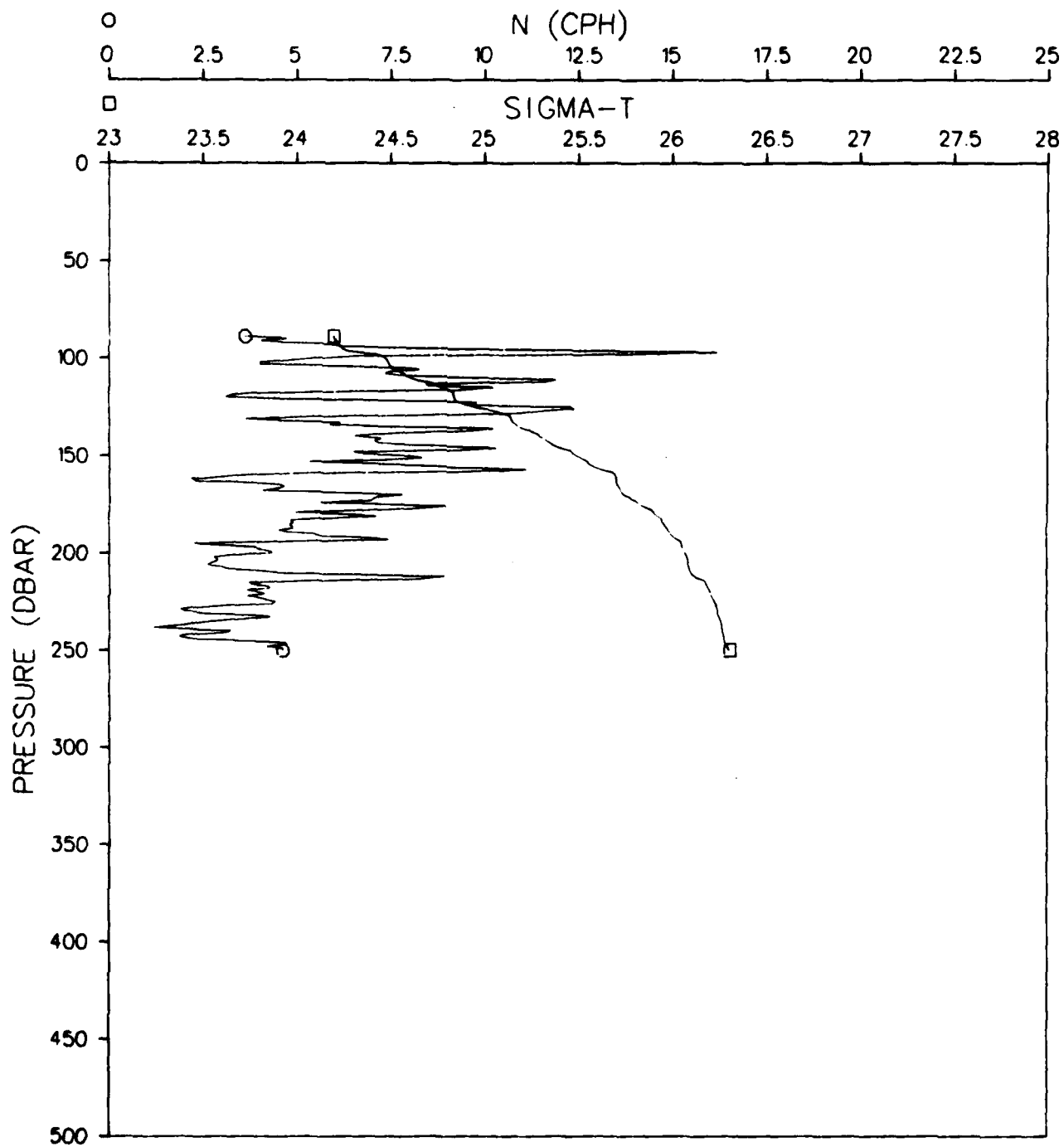


Figure 419.

ATOM 79 RECOVERY
STATION 200012

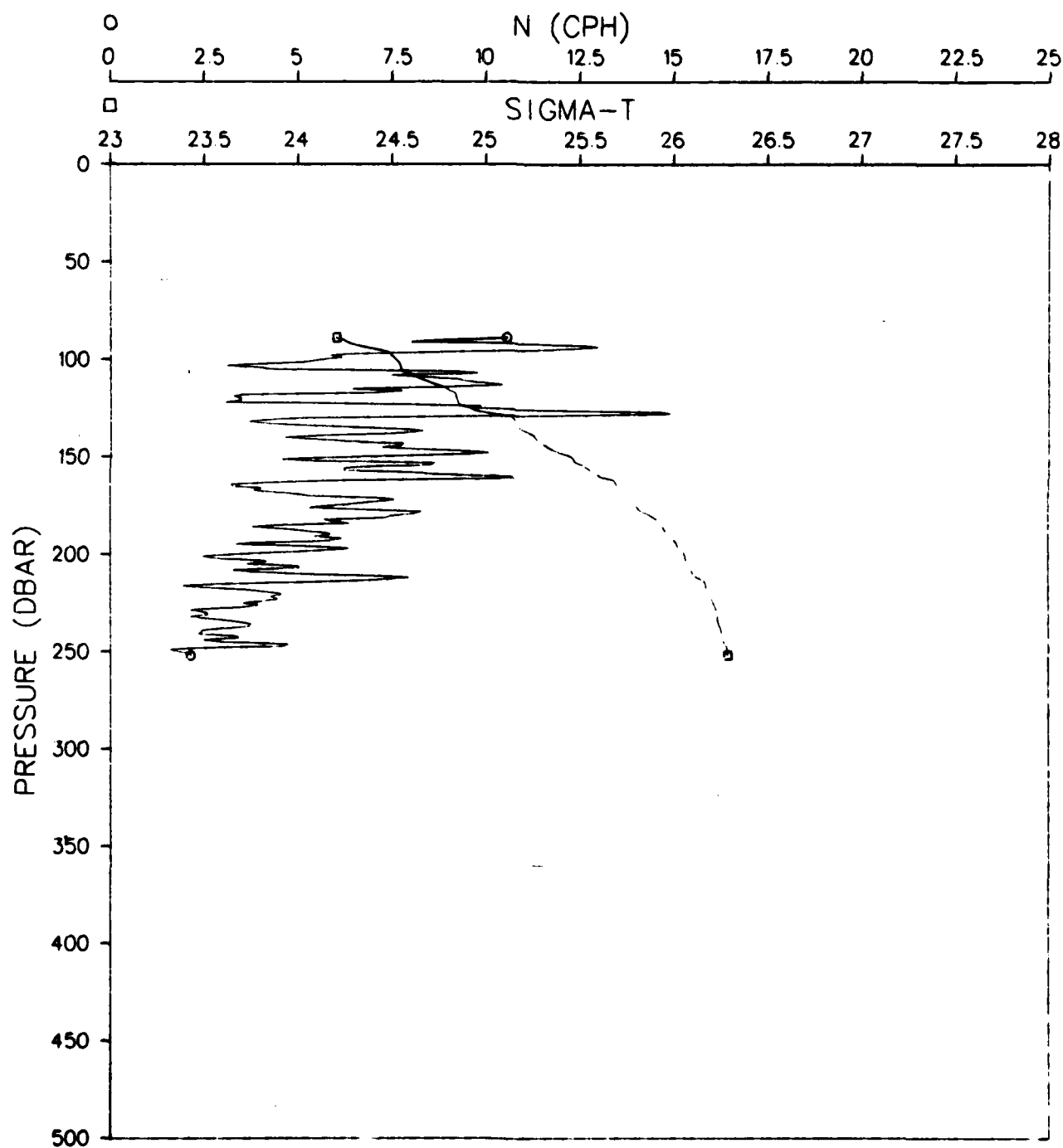


Figure 420.

ATOM 79 RECOVERY
STATION 200013

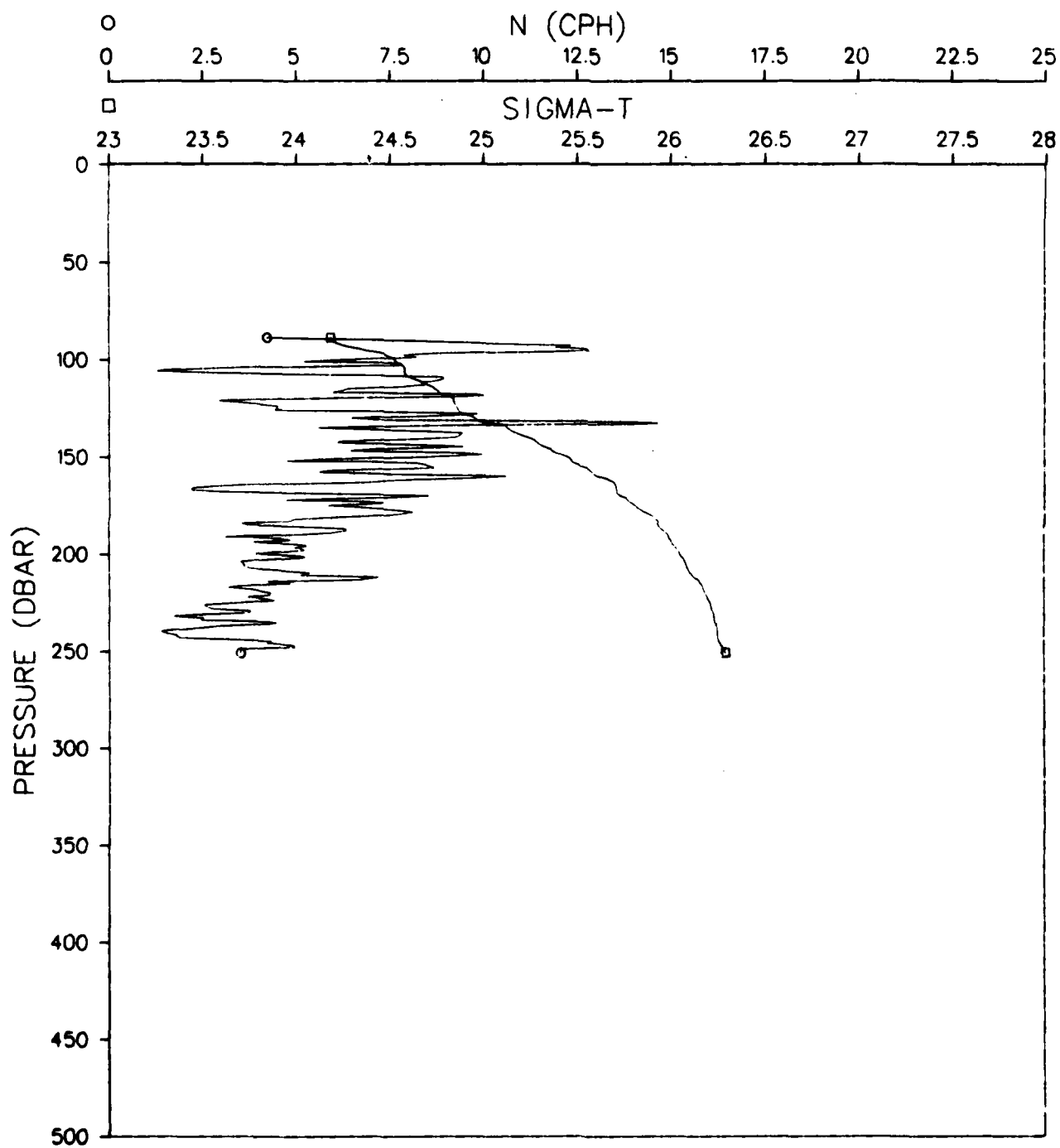


Figure 421.

ATOM 79 RECOVERY
STATION 200014

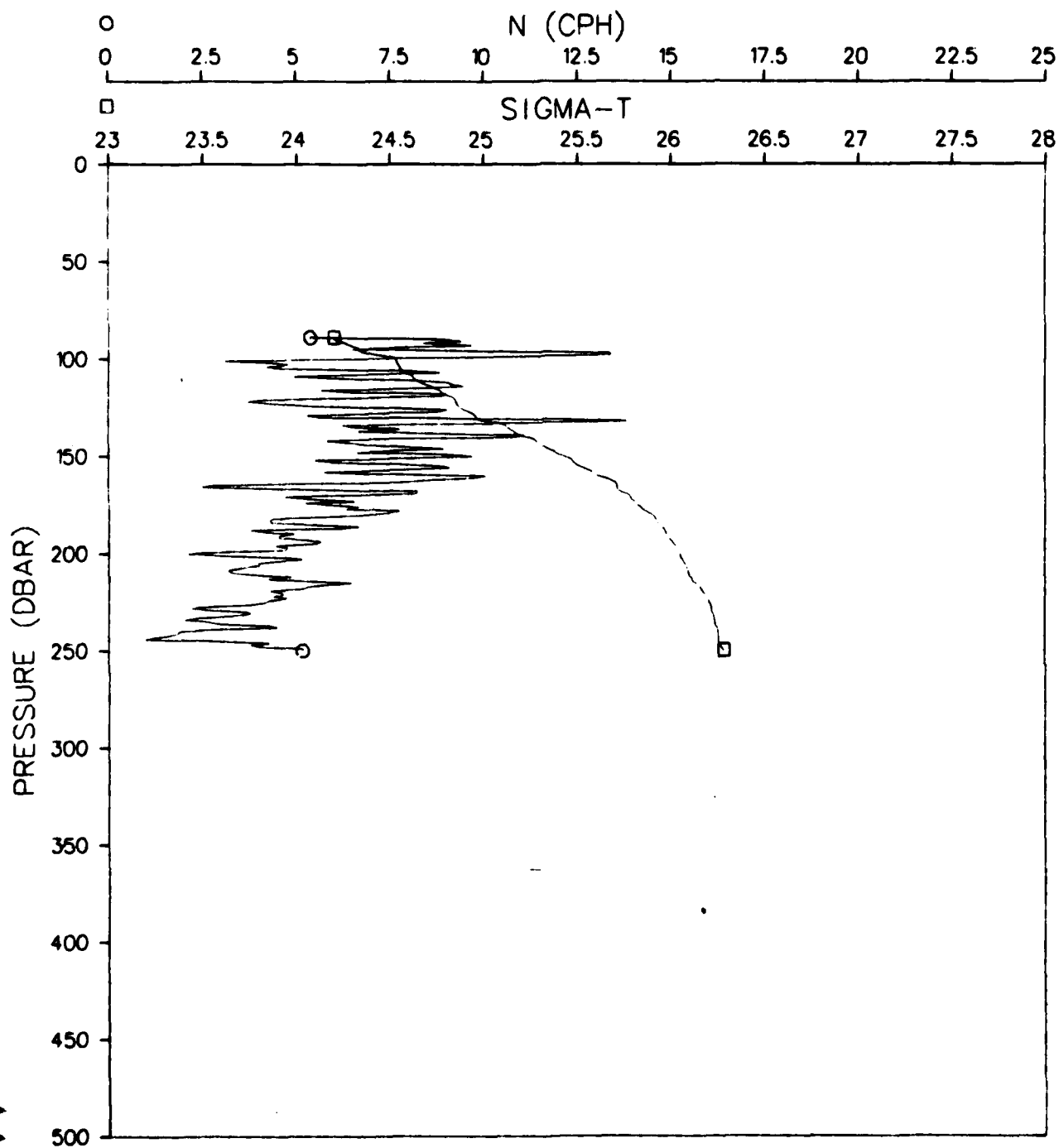


Figure 422.

ATOM 79 RECOVERY
STATION 200015

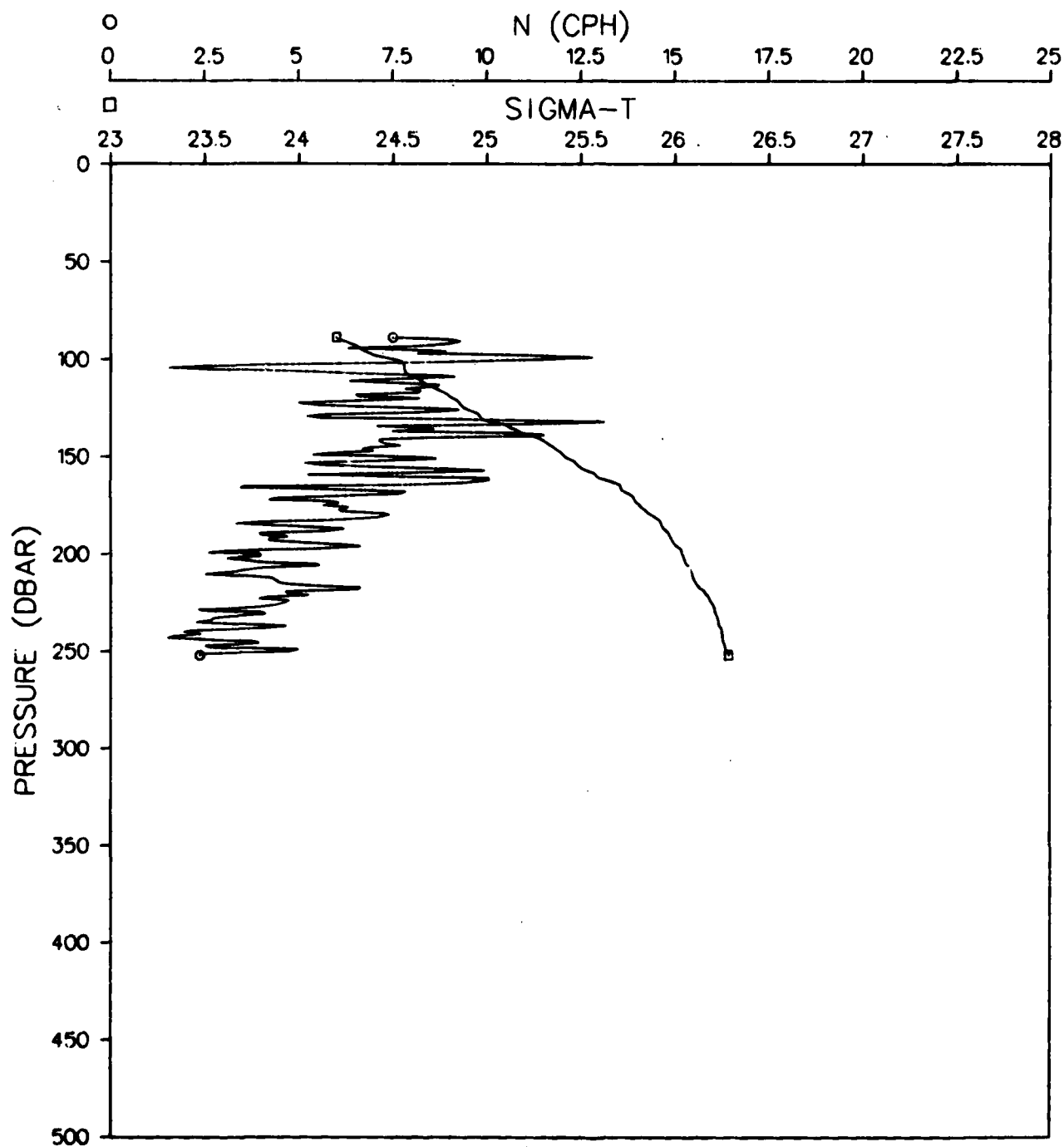


Figure 423.

ATOM 79 RECOVERY
STATION 200016

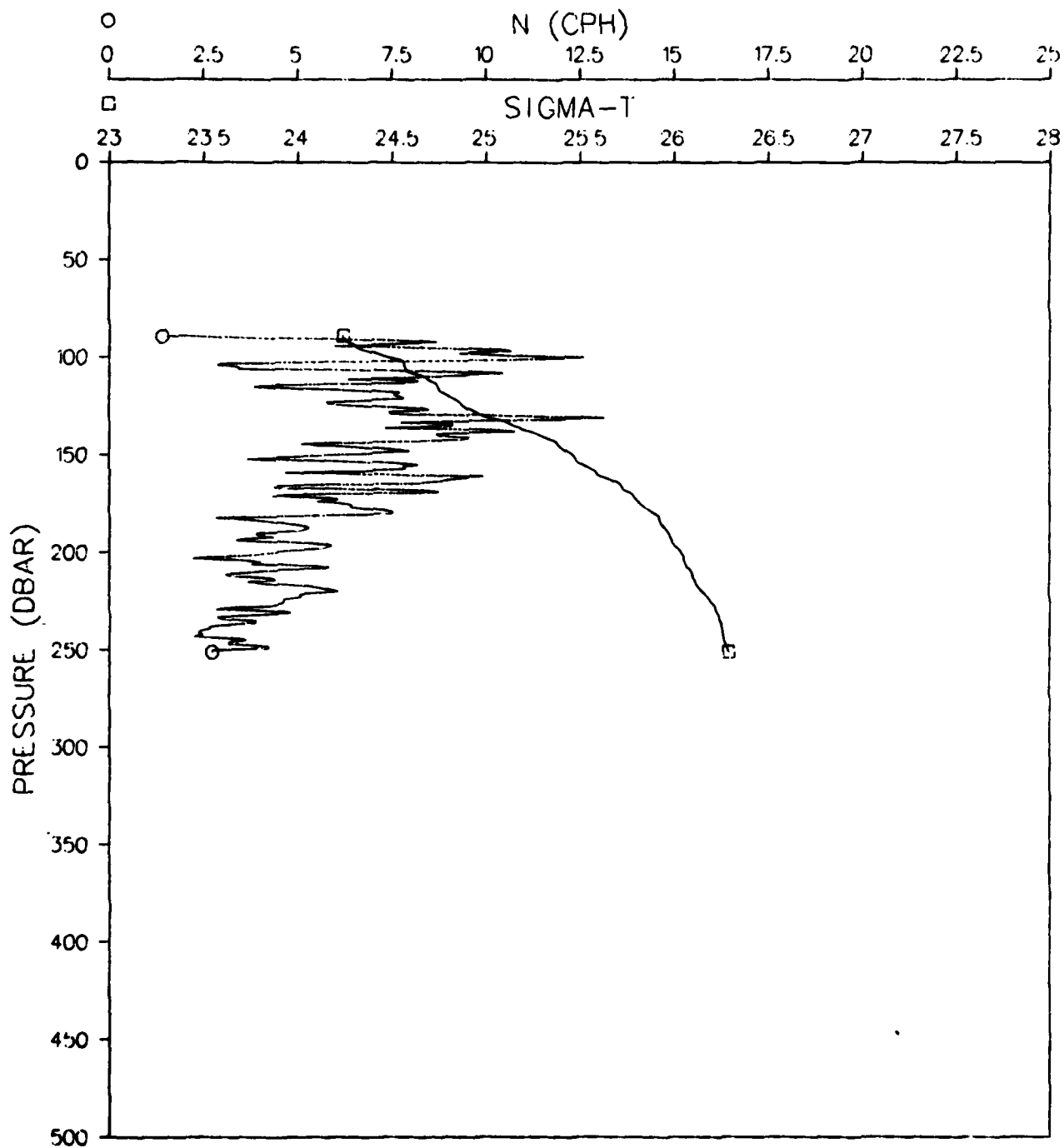


Figure 424.

ATOM 79 RECOVERY
STATION 200017

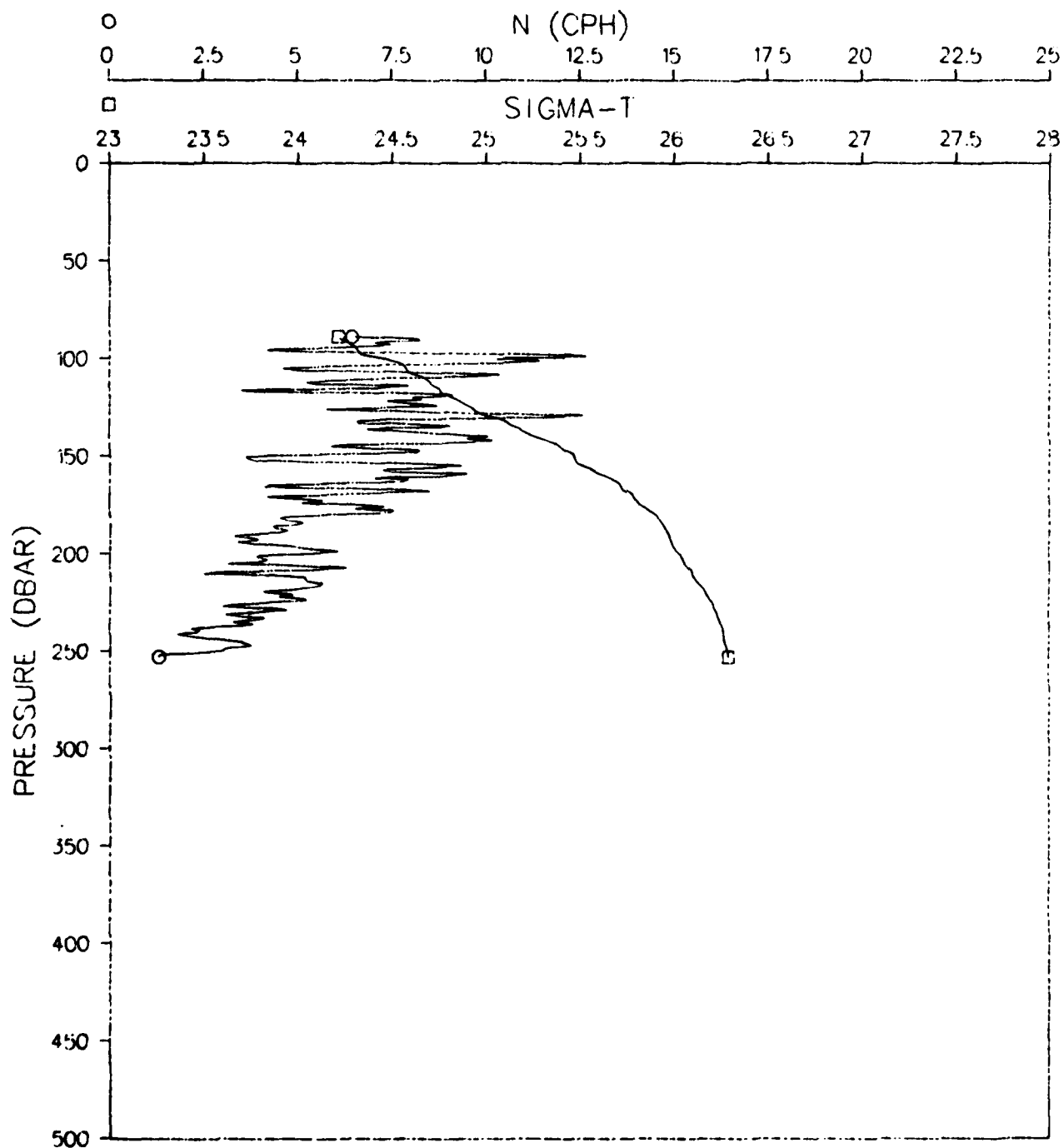


Figure 425.

ATOM 79 RECOVERY
STATION 200018

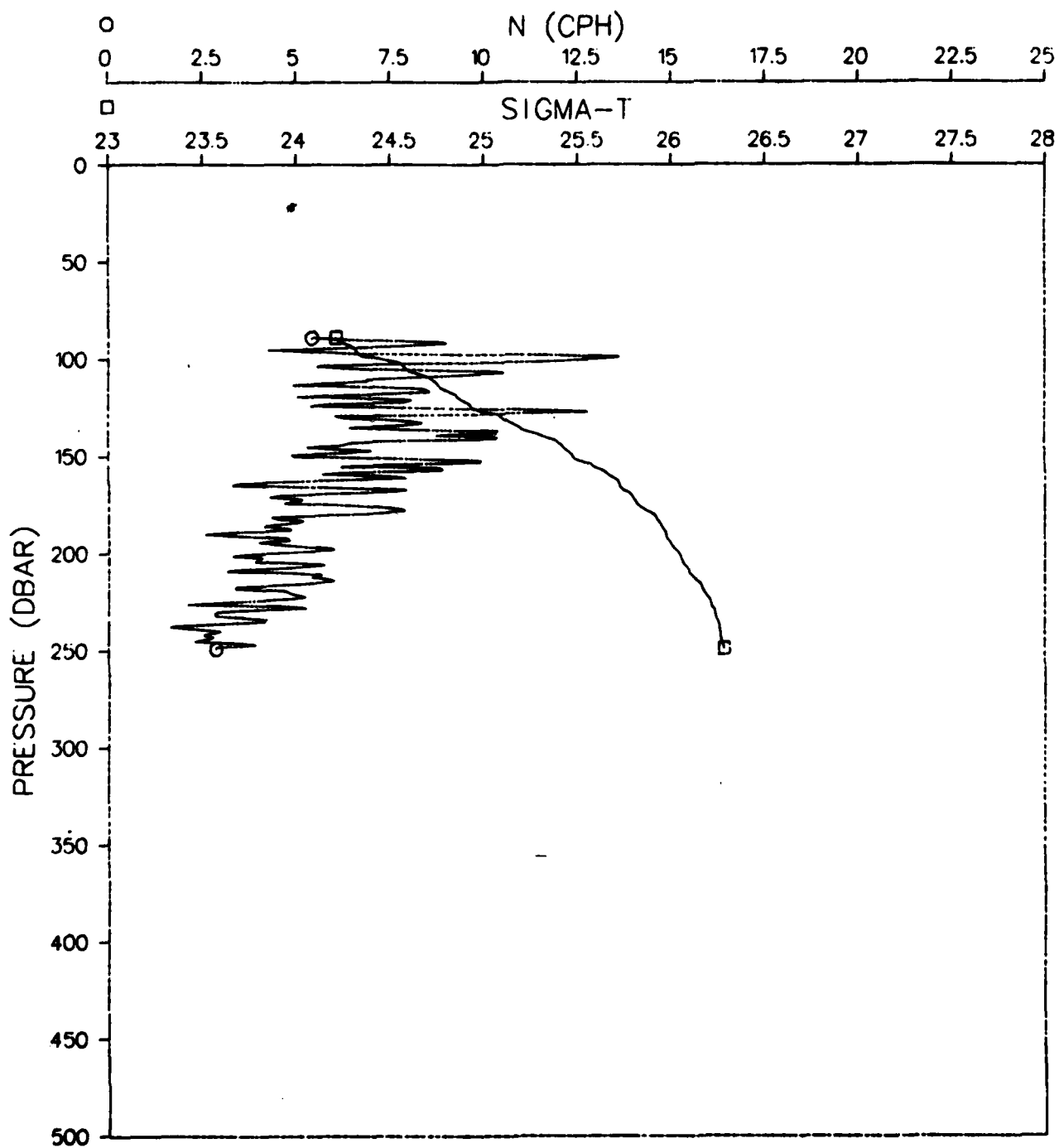


Figure 426.

ATOM 79 RECOVERY
STATION 200019

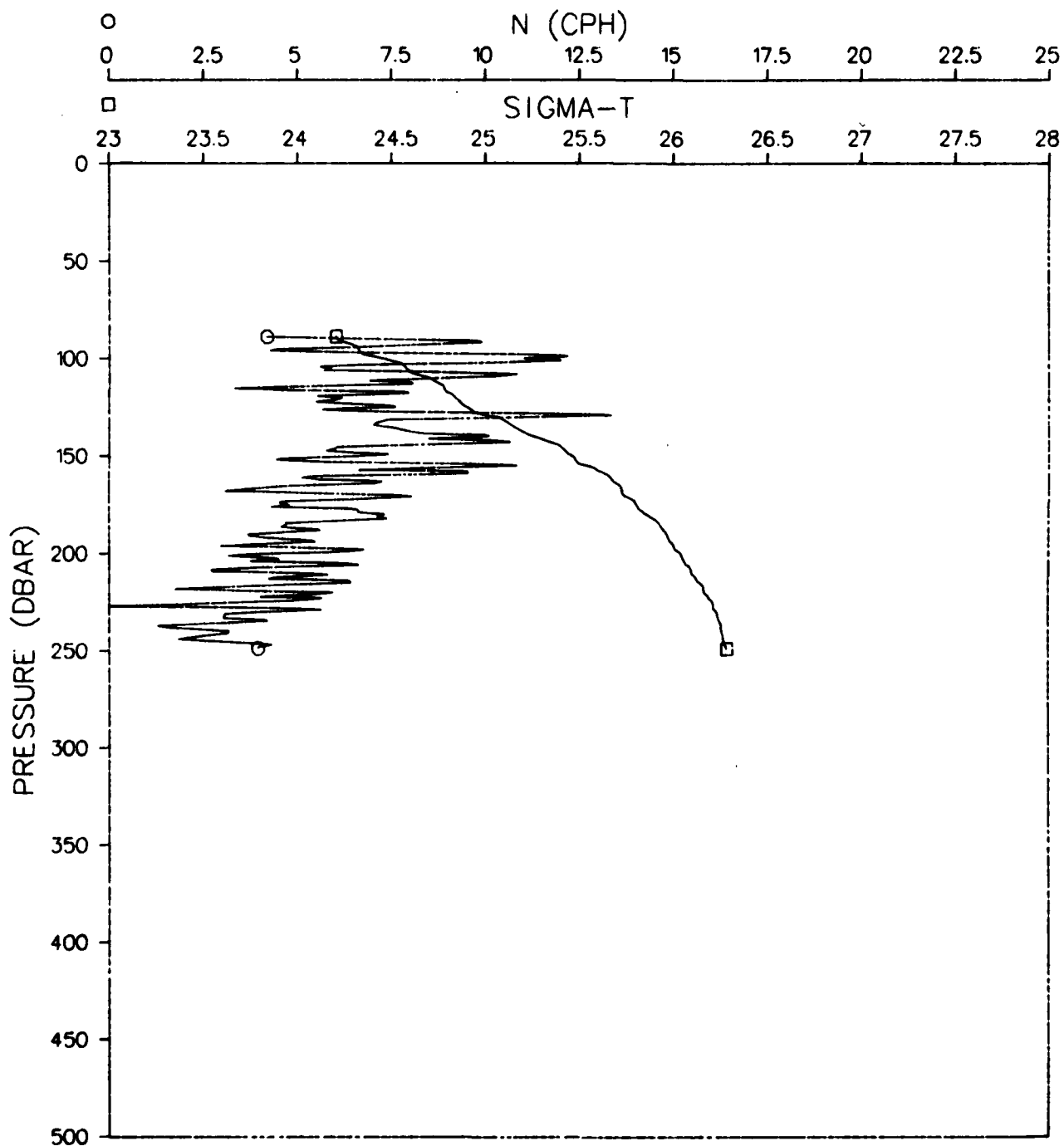


Figure 427.

ATOM 79 RECOVERY
STATION 200020

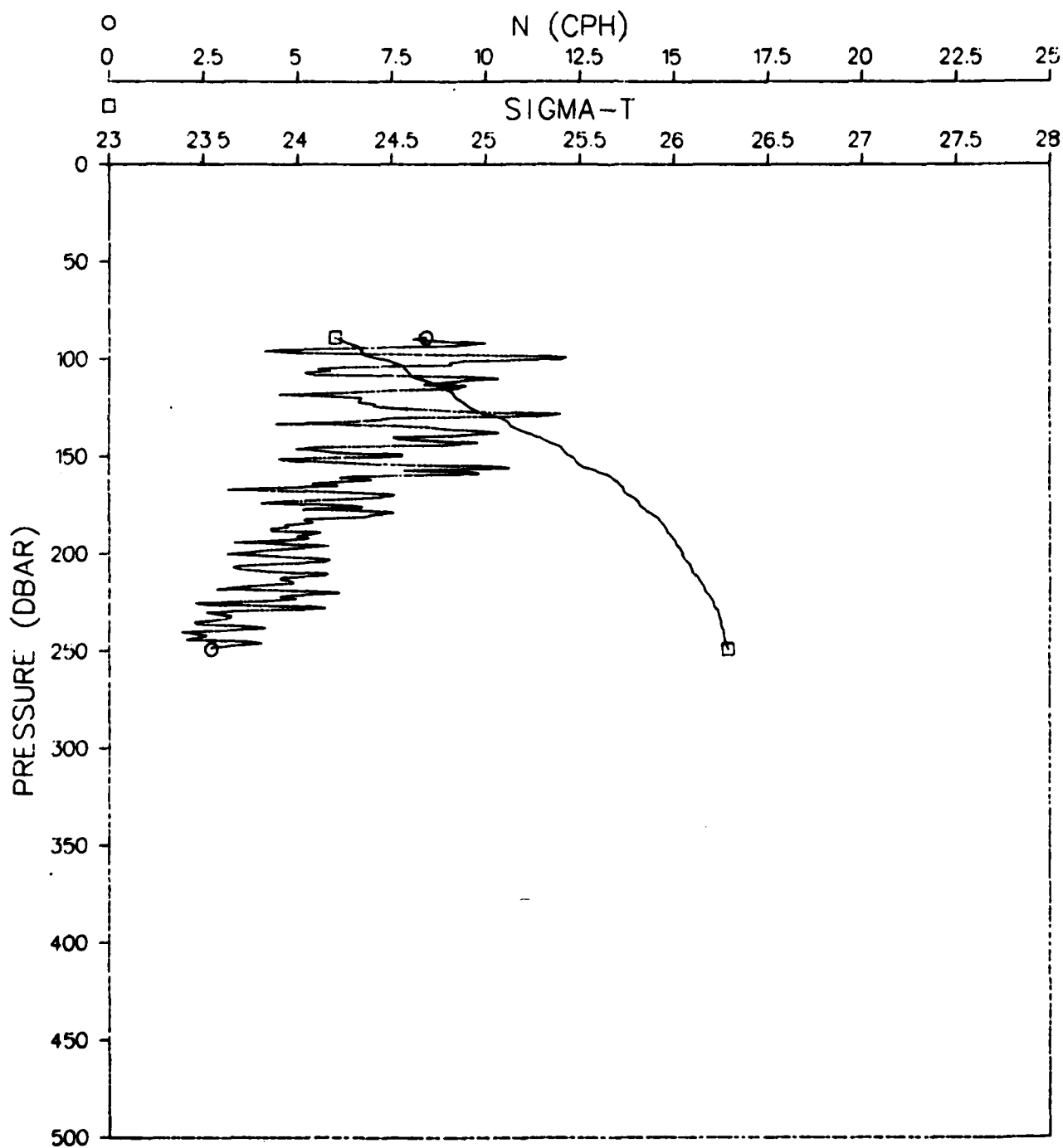


Figure 428.

ATOM 79 RECOVERY
STATION 200021

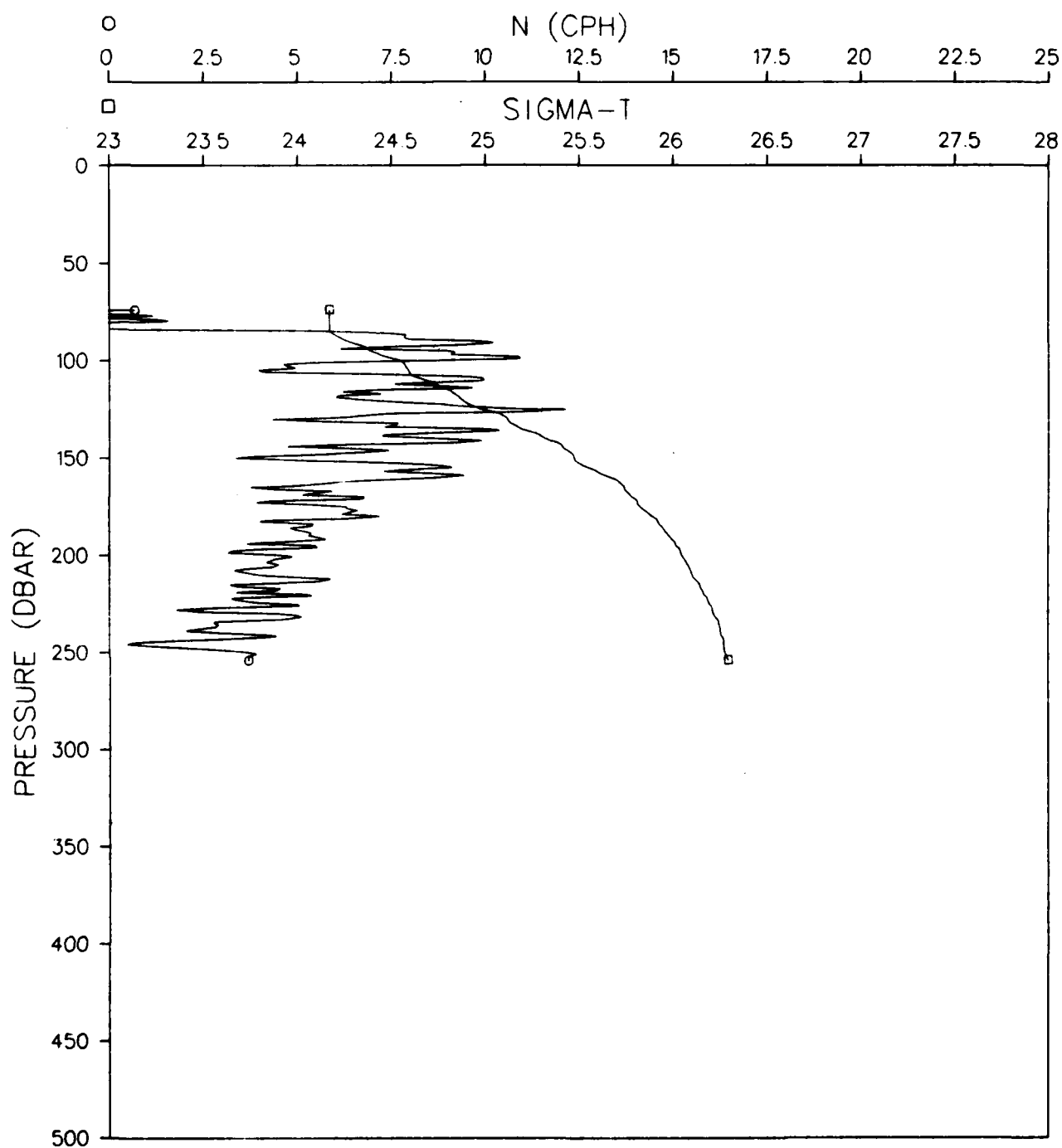


Figure 429.

ATOM 79 RECOVERY
STATION 200022

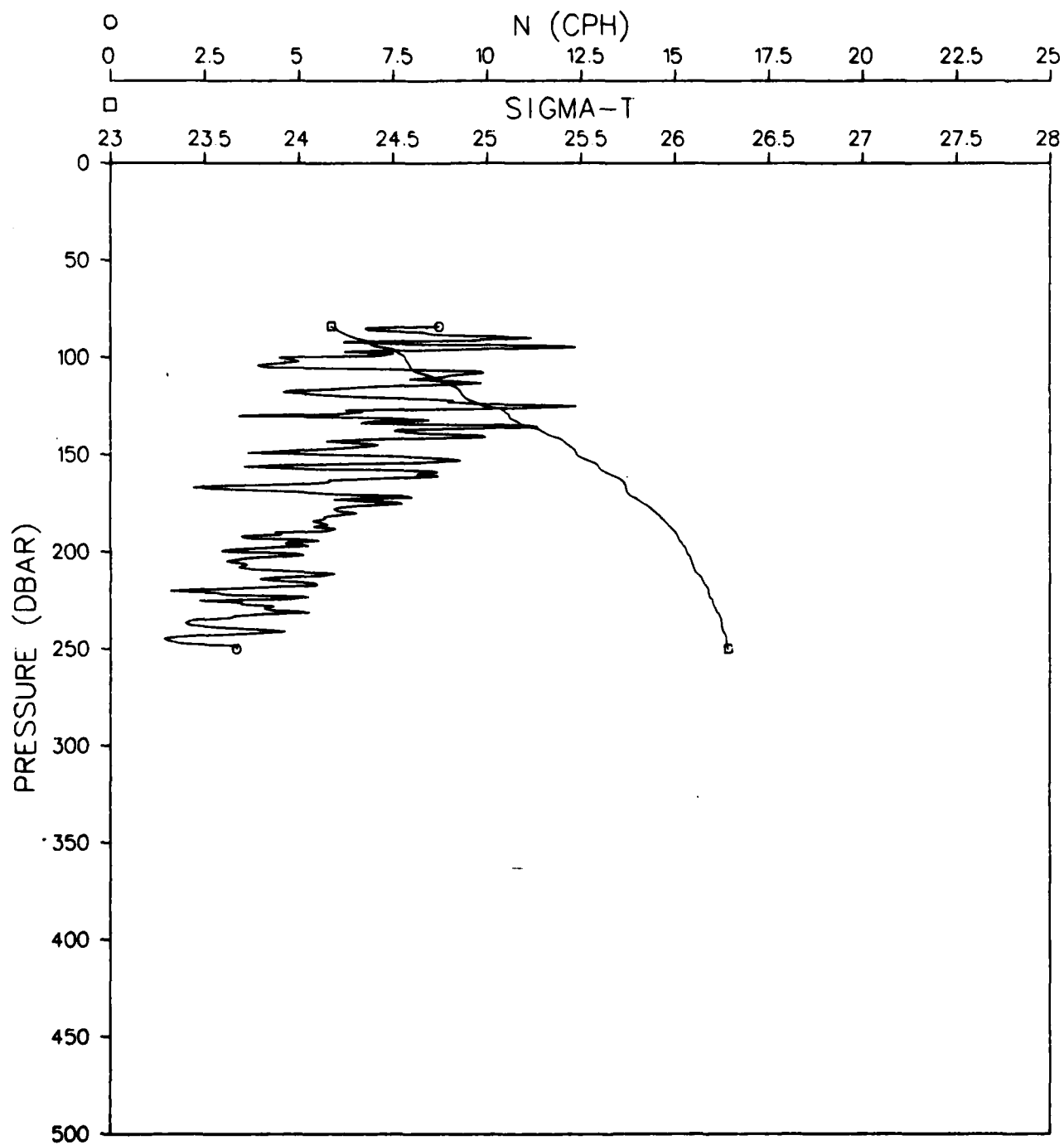


Figure 430.

ATOM 79 RECOVERY
STATION 200023

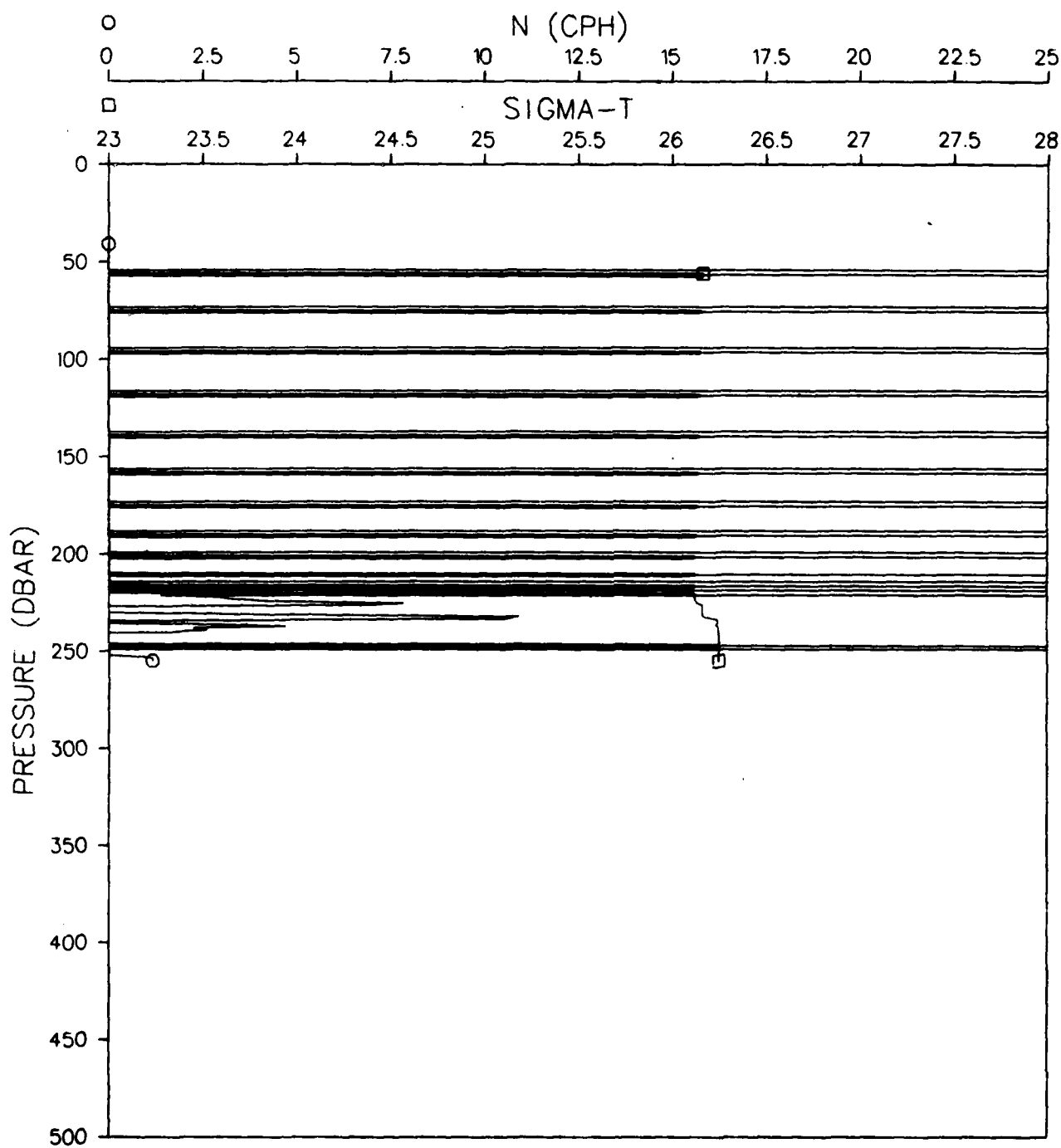


Figure 431.

ATOM 79 RECOVERY
STATION 200024

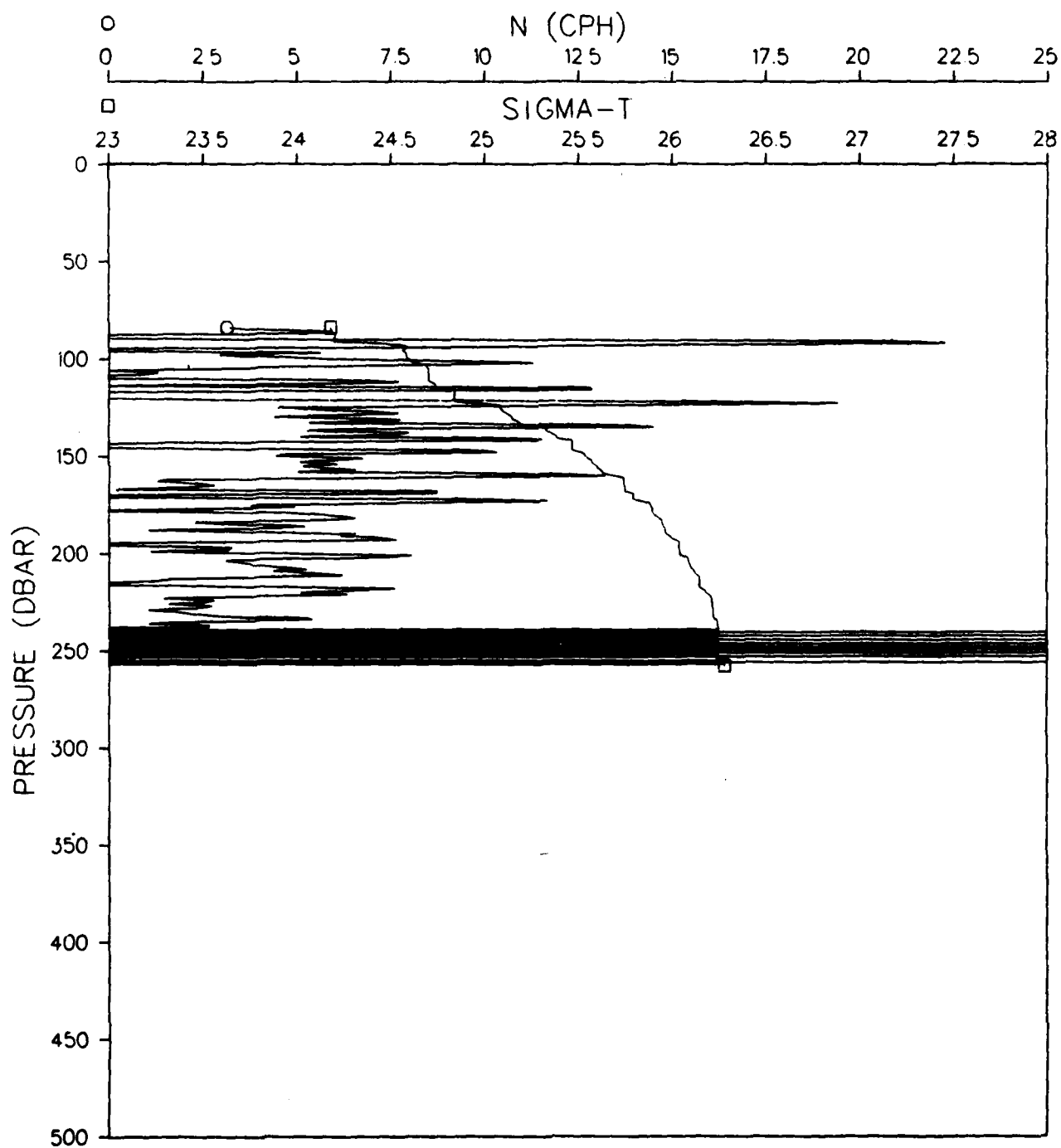


Figure 432.

ATOM 79 RECOVERY
STATION 200025

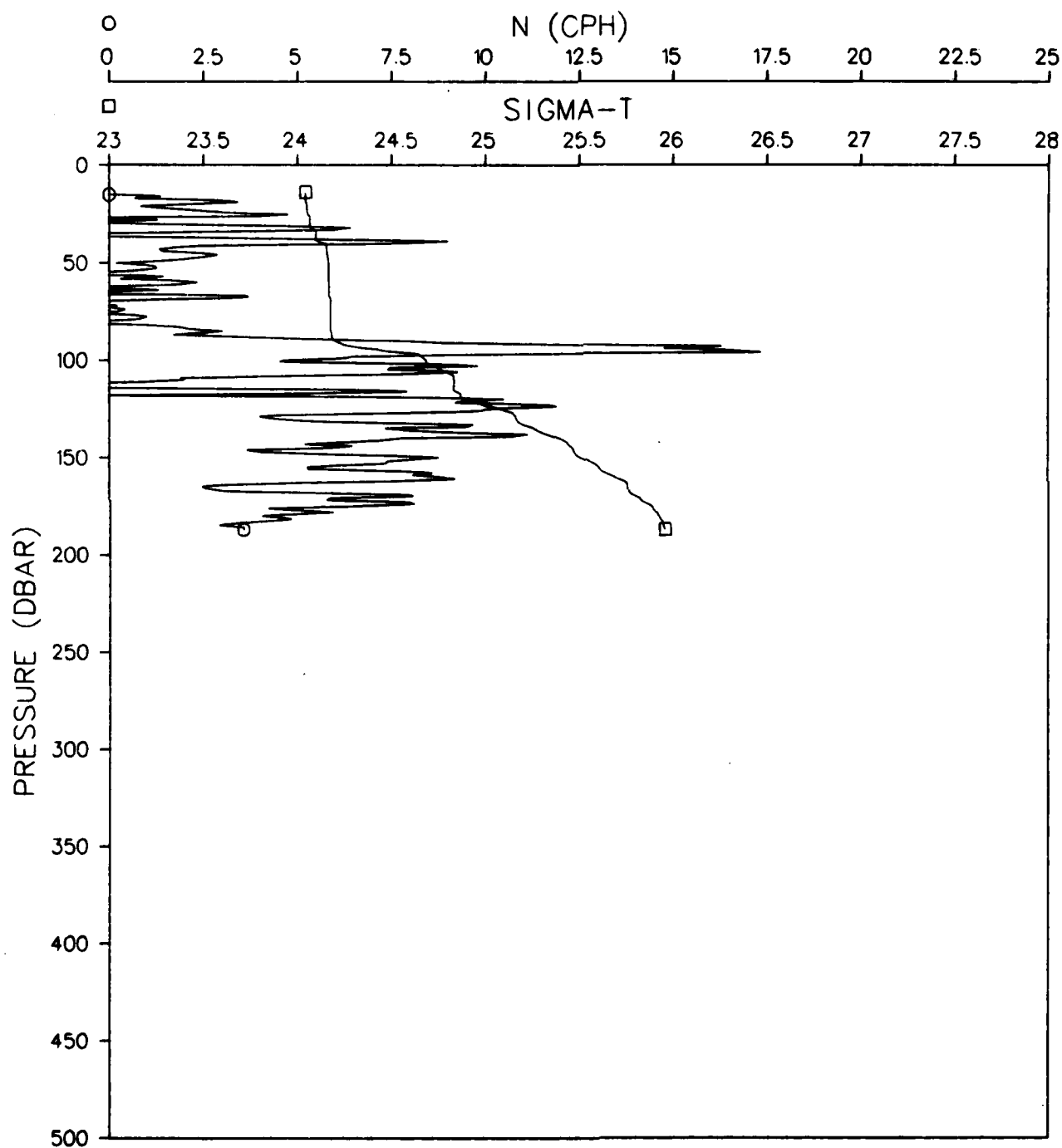


Figure 433.

ATOM 79 RECOVERY
STATION 200026

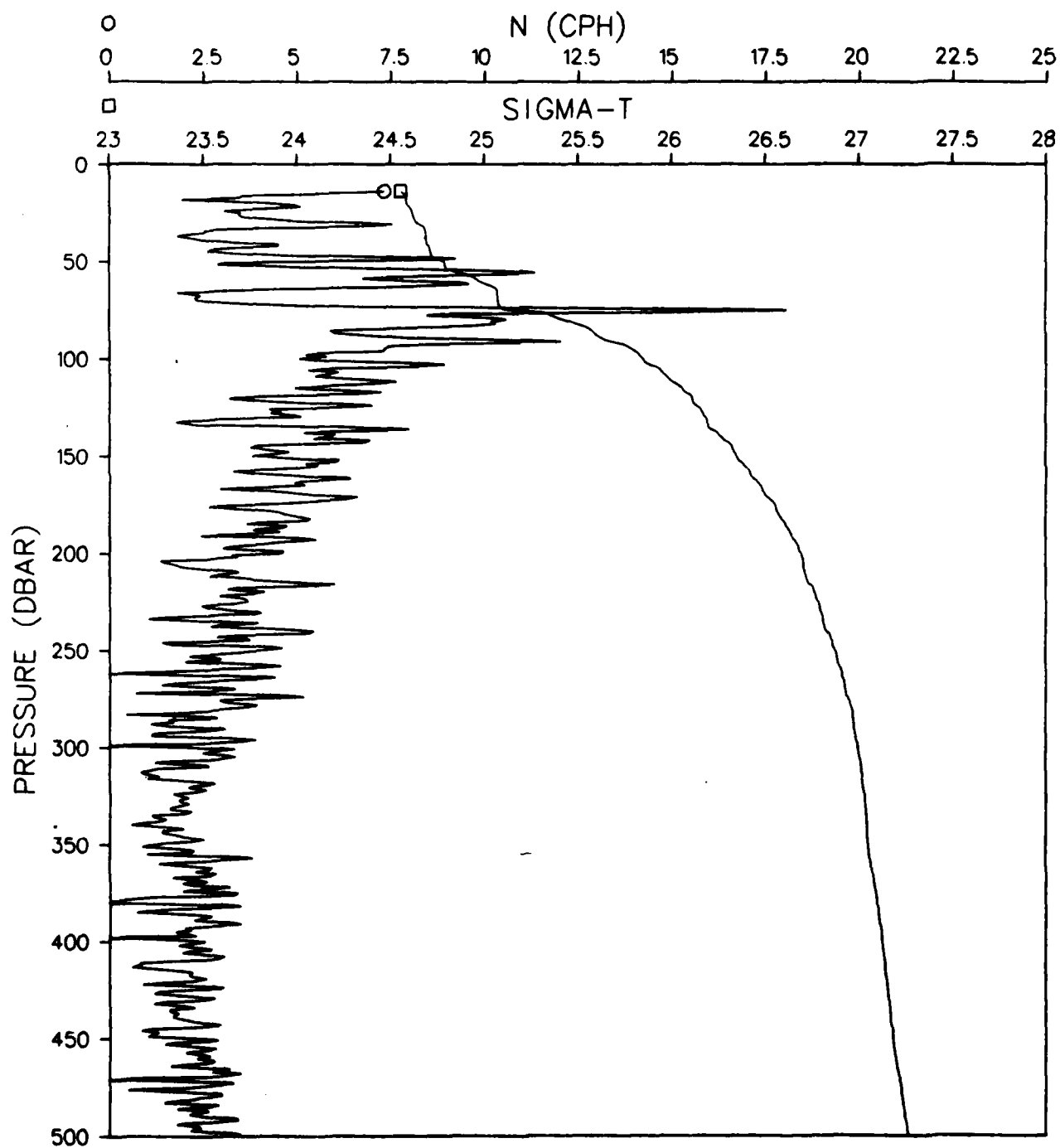


Figure 434.

ATOM 79 RECOVERY
STATION 200027

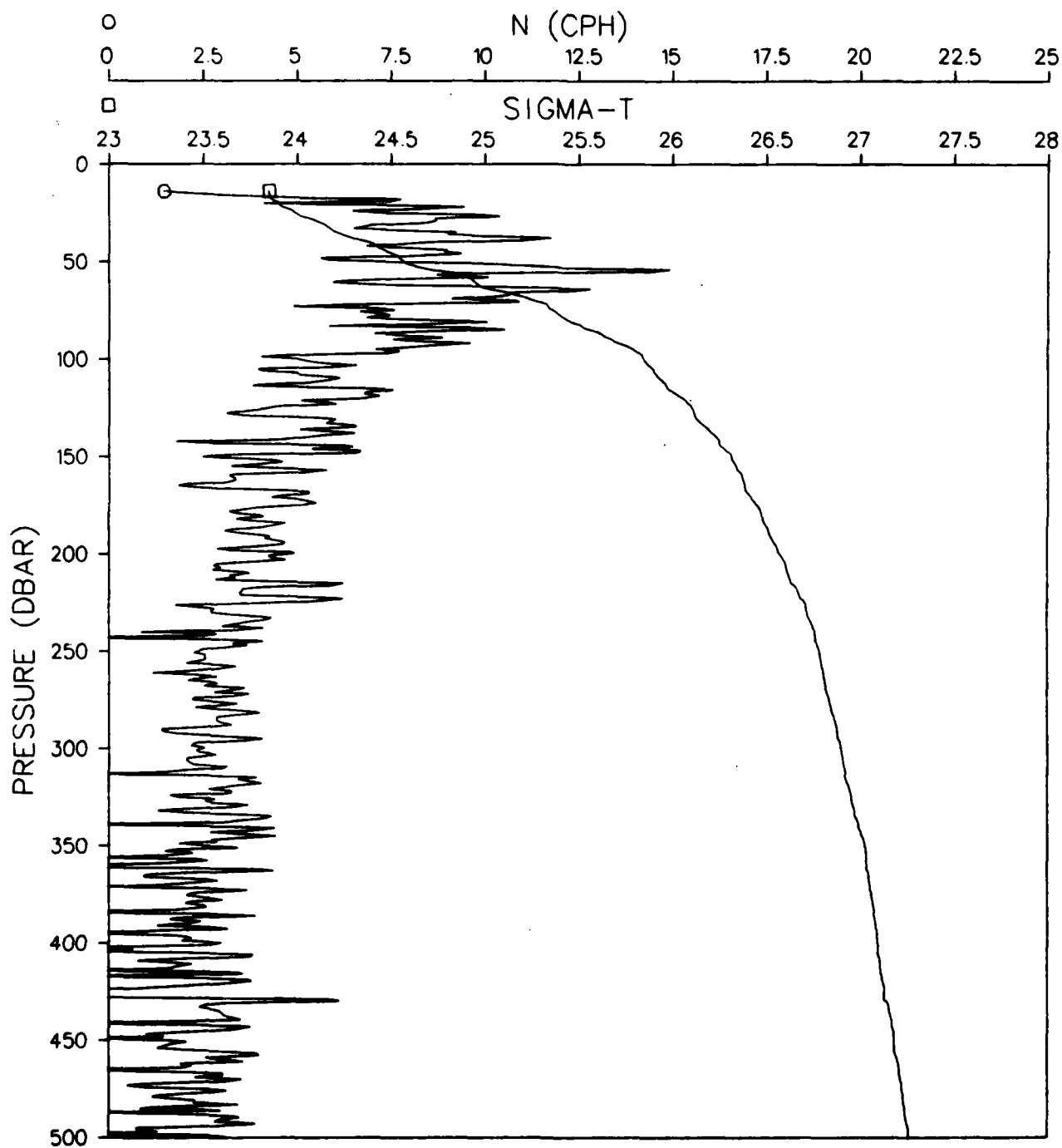


Figure 435.

ATOM 79 RECOVERY
STATION 200028

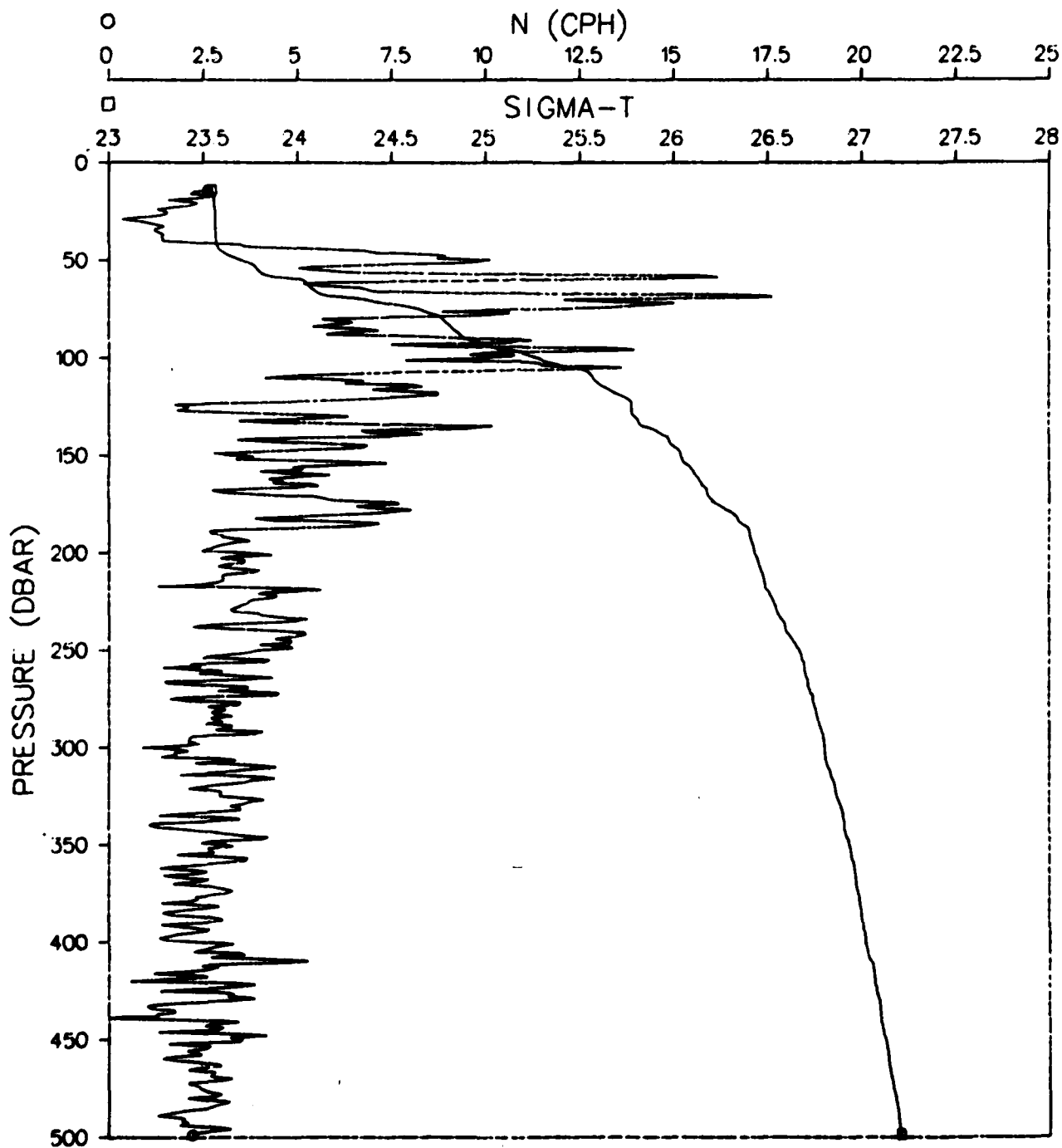


Figure 436.

ATOM 79 RECOVERY
STATION 200029

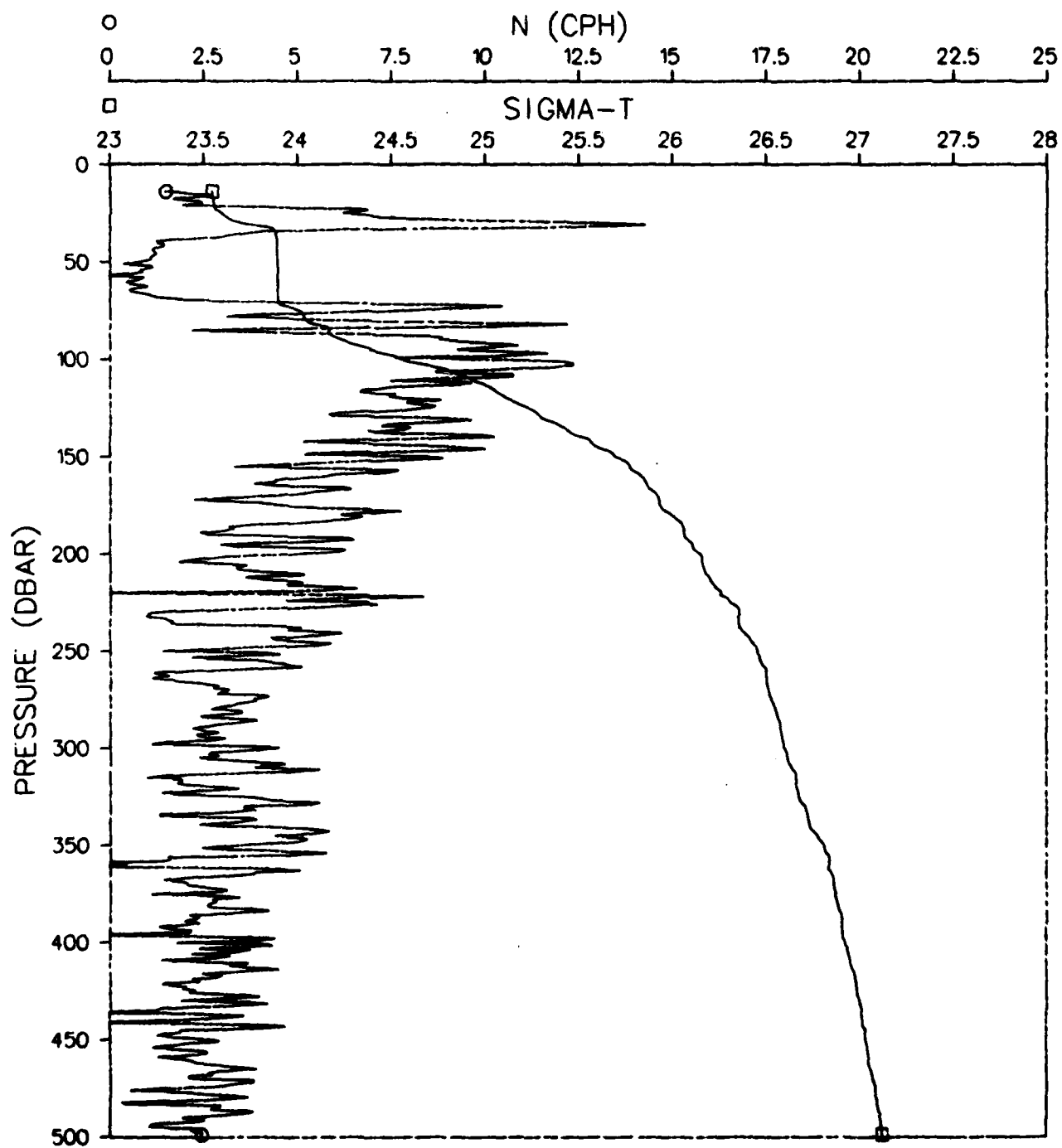


Figure 437.

ATOM 79 RECOVERY
STATION 200030

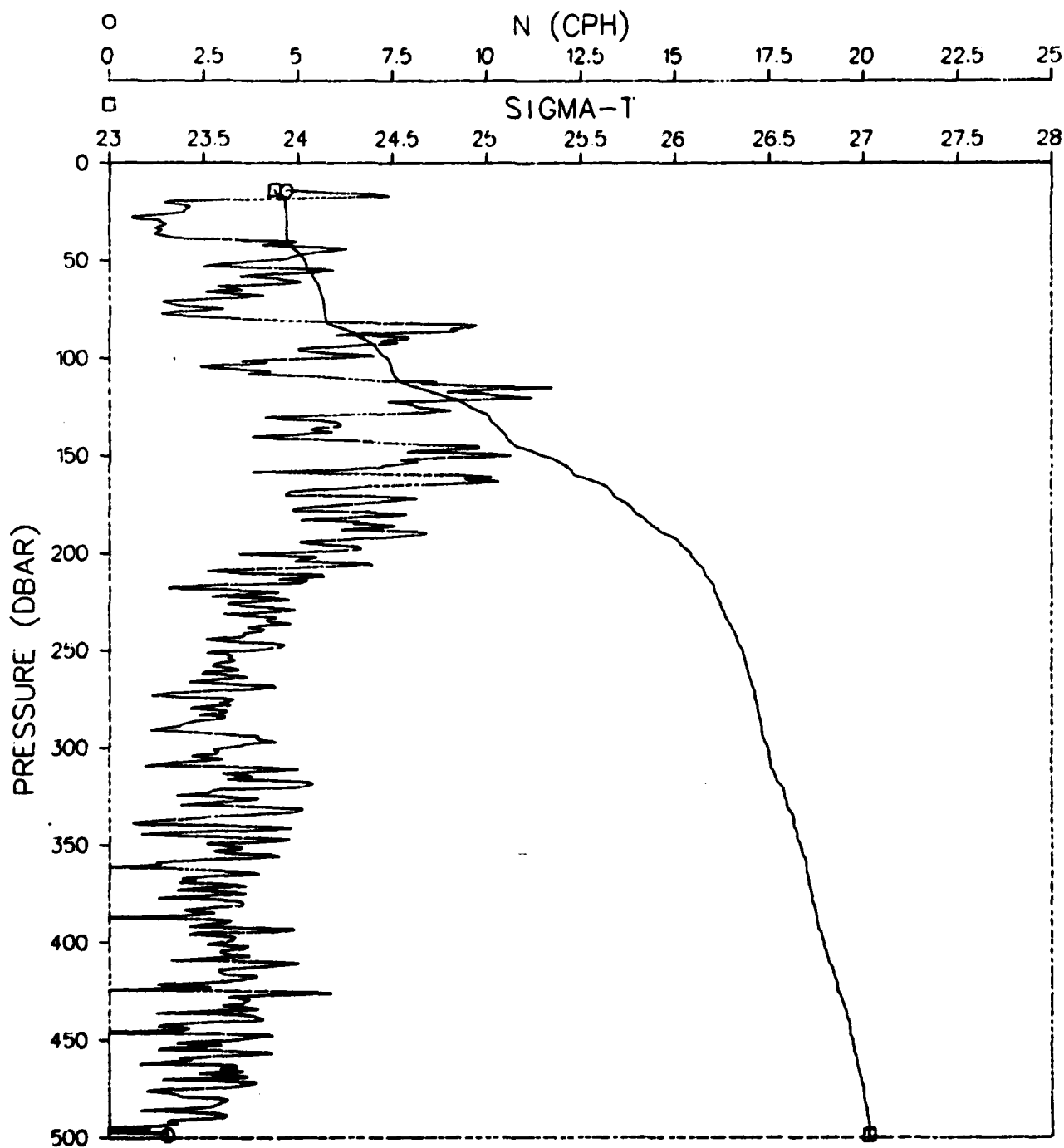


Figure 438.

ATOM 79 RECOVERY
STATION 200031

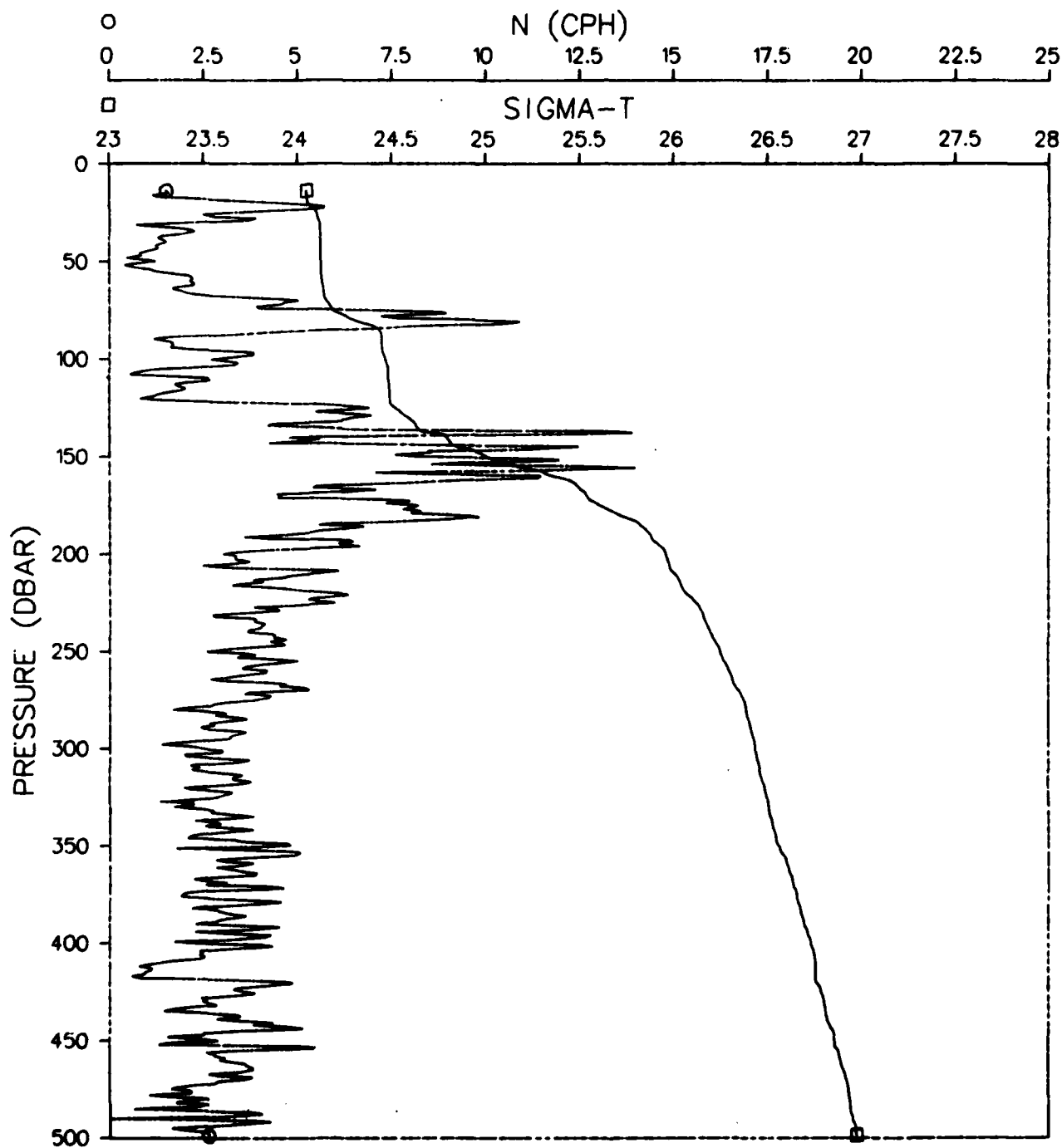


Figure 439.

ATOM 79 RECOVERY
STATION 200032

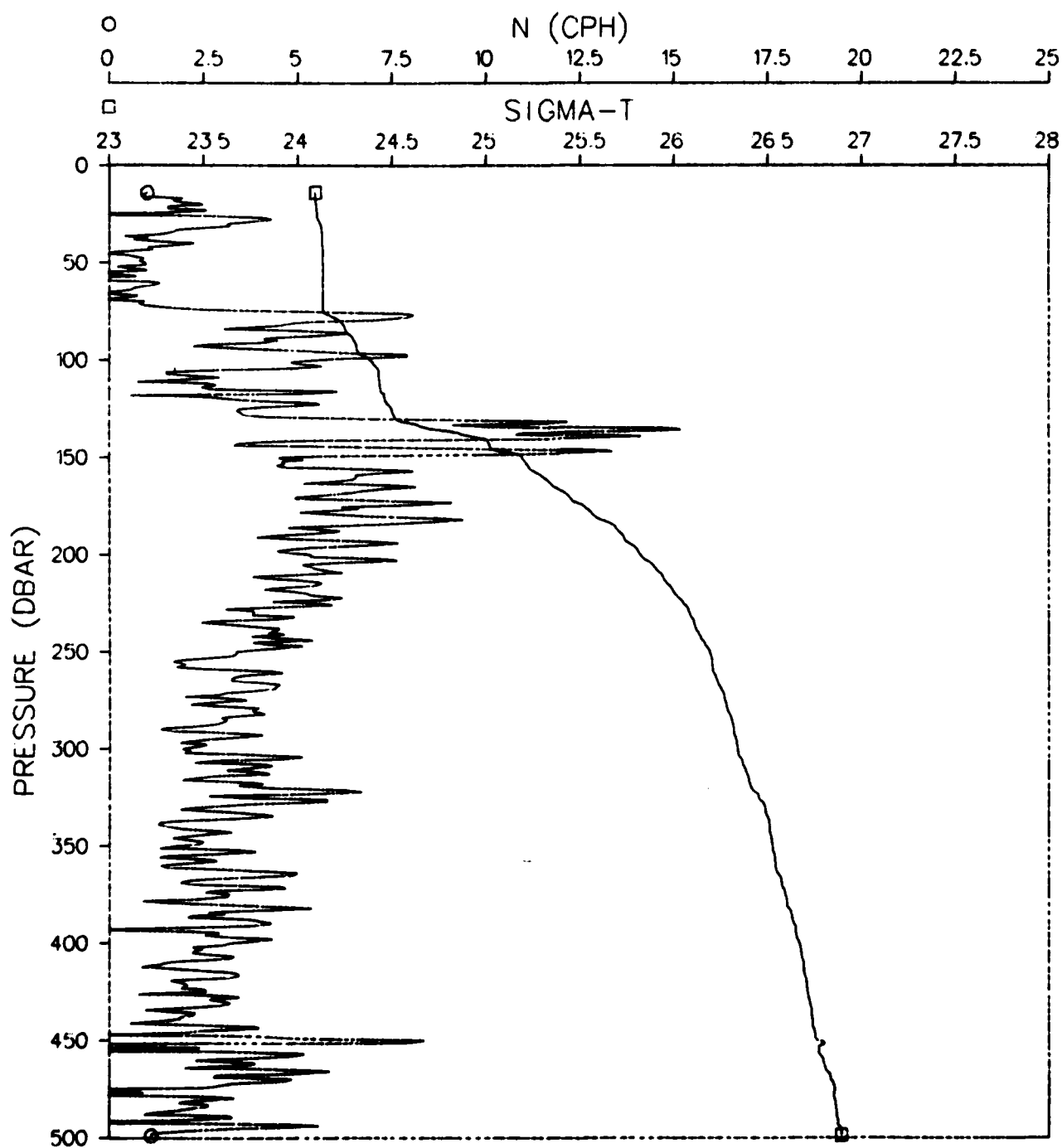


Figure 440.

ATOM 79 RECOVERY
STATION 200033

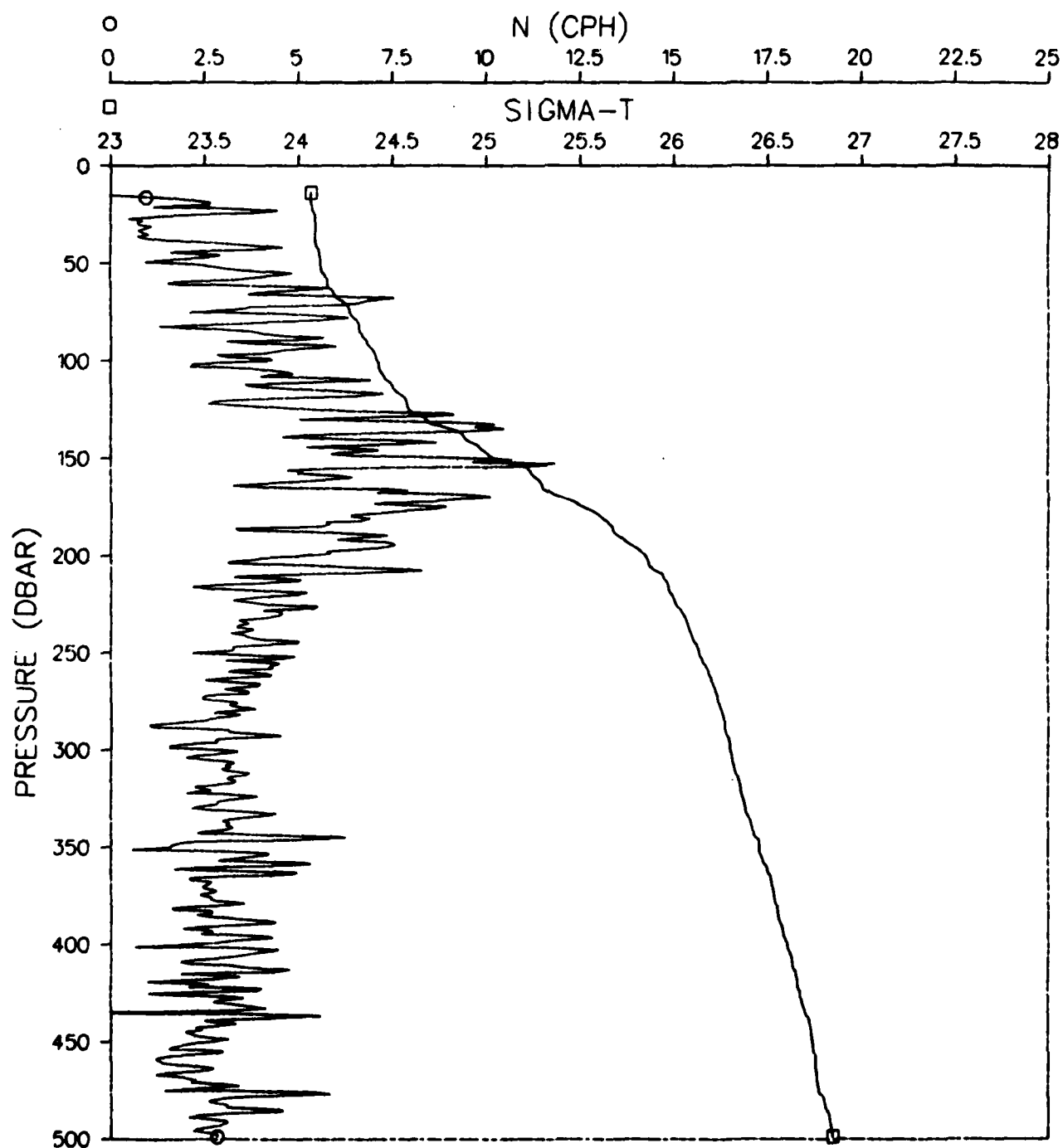


Figure 441.

ATOM 79 RECOVERY
STATION 200034

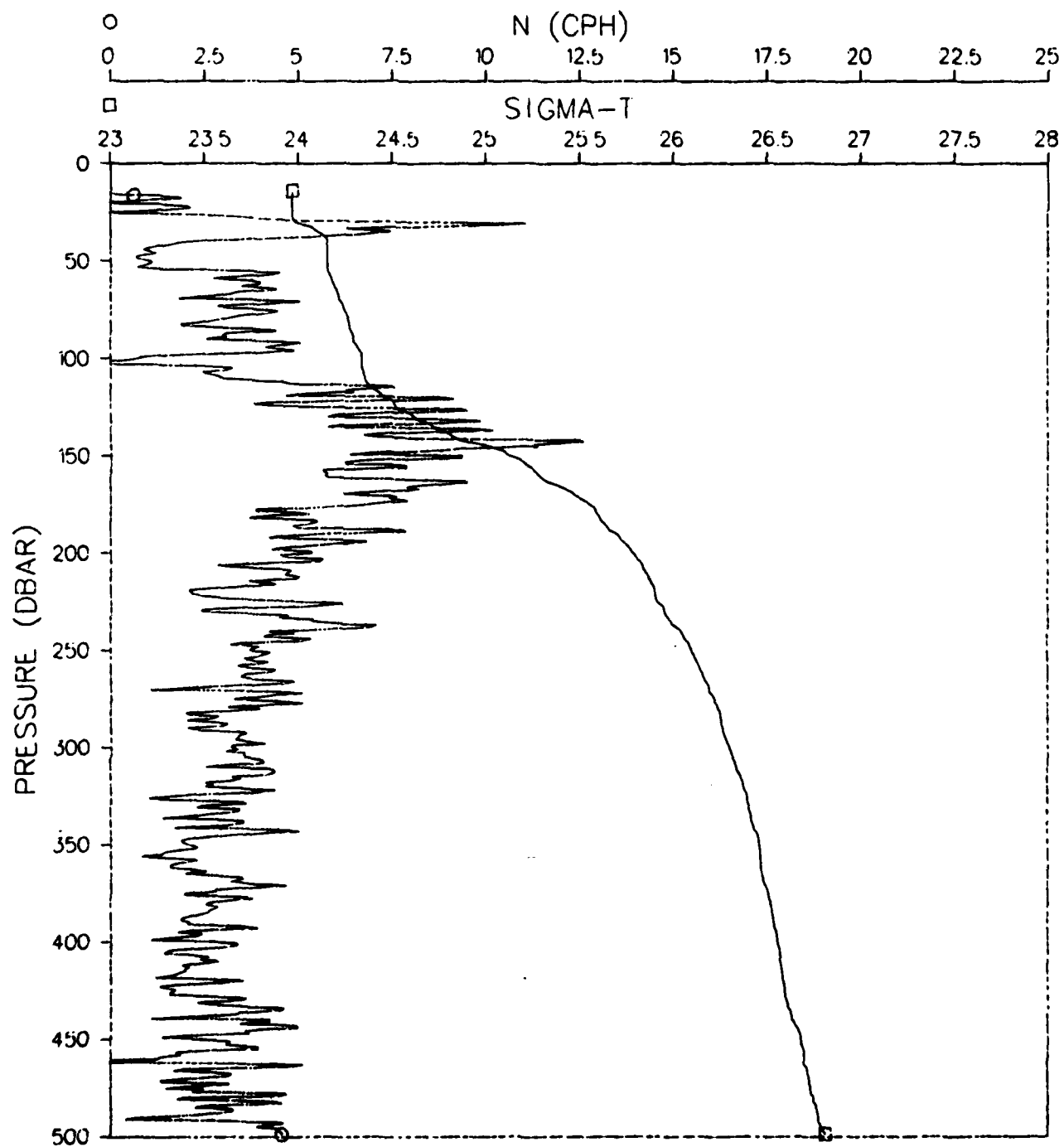


Figure 442.

ATOM 79 RECOVERY
STATION 200035

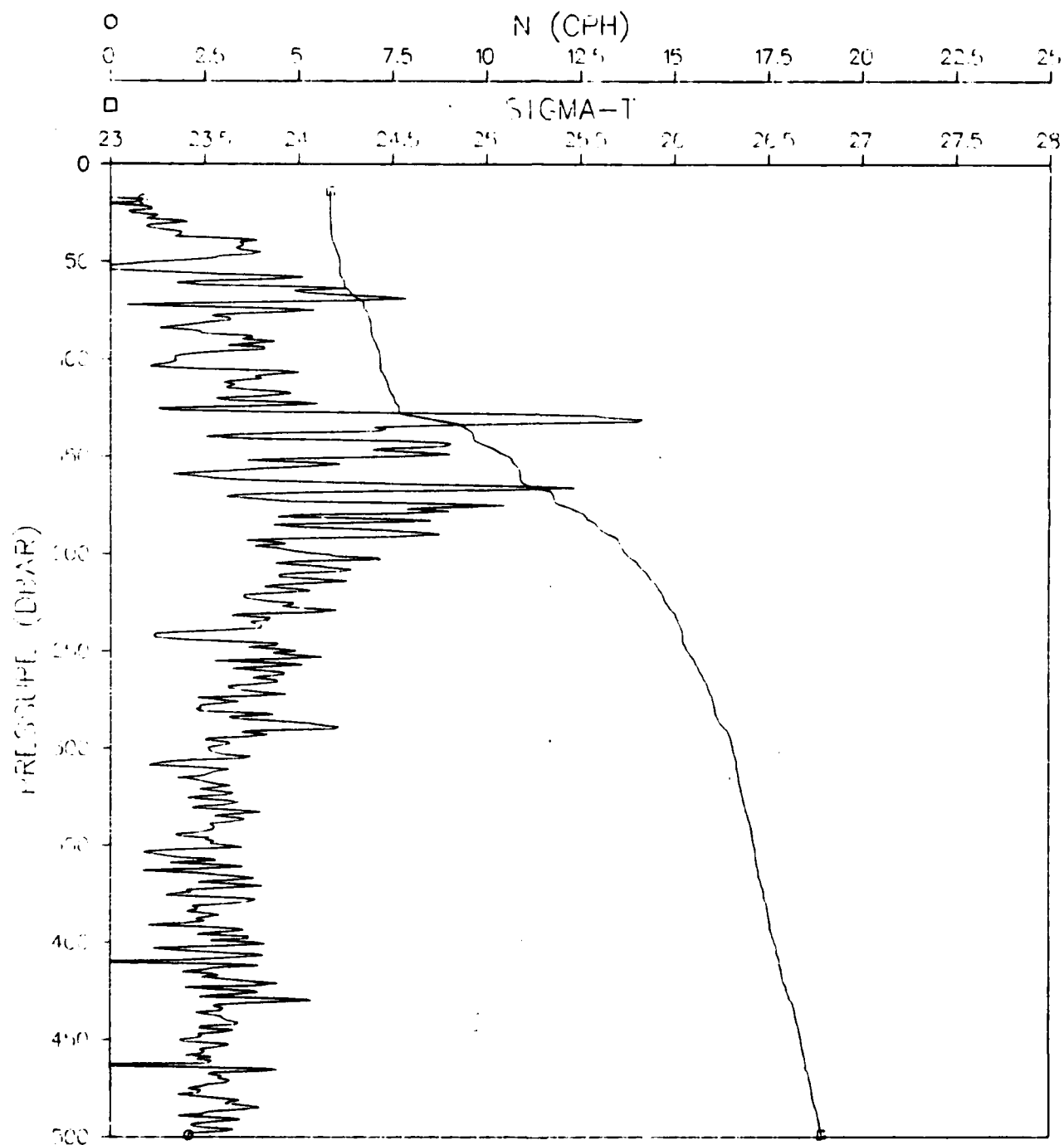


Figure 443.

ATOM 79 RECOVERY
STATION 200036

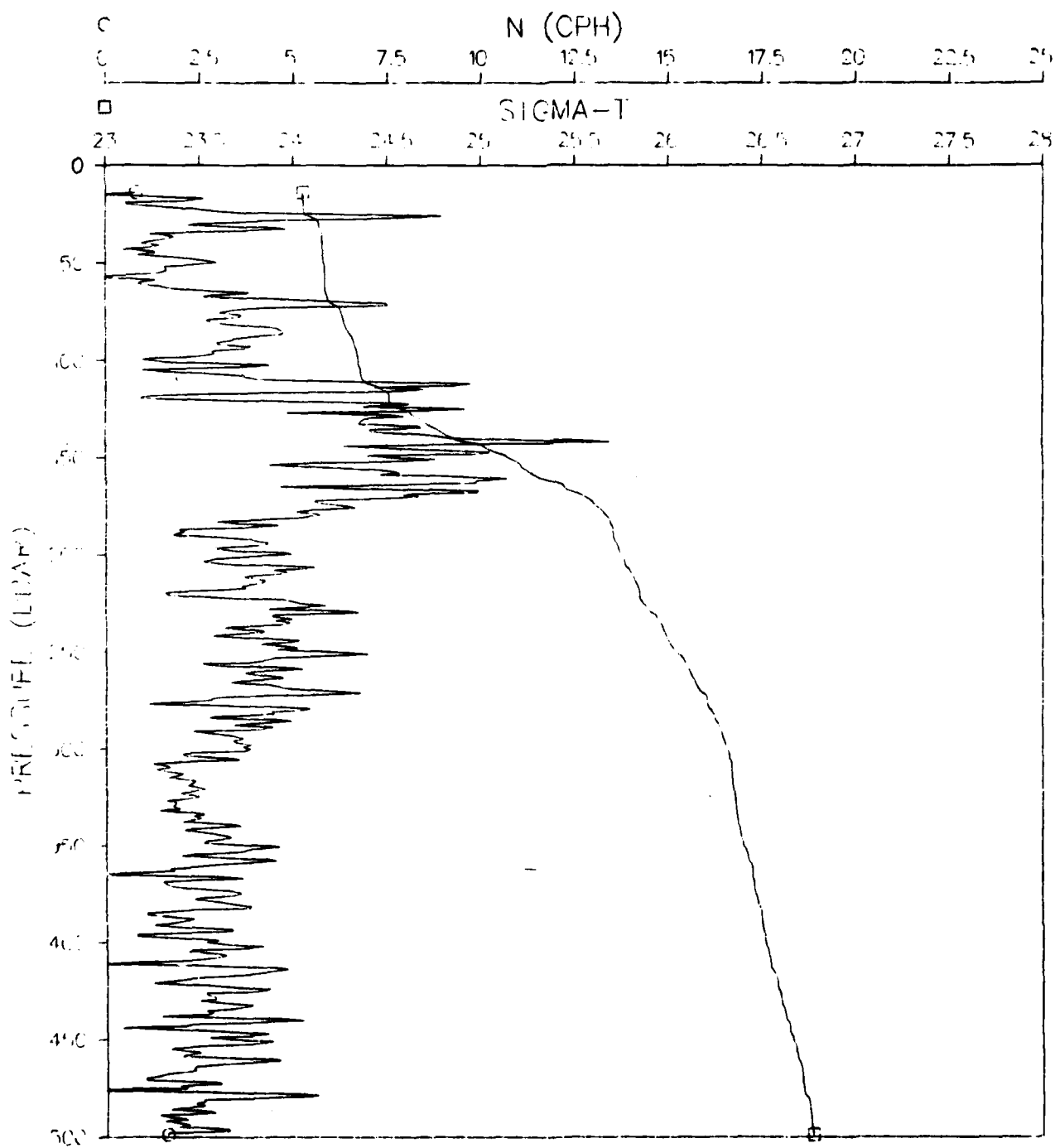


Figure 444.

ATOM 79 RECOVERY STATION 200037

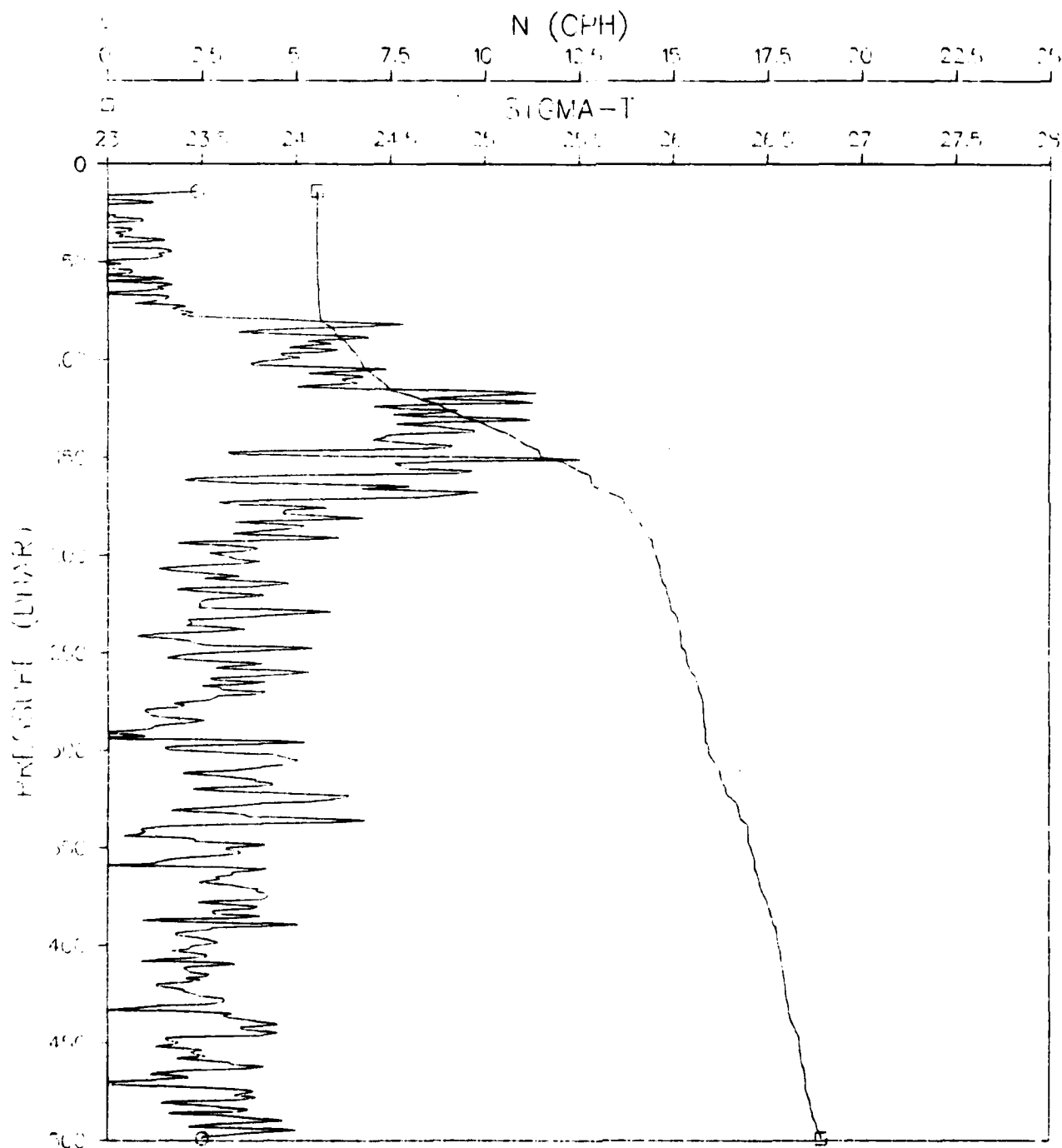


Figure 445.

ATOM 79 RECOVERY
STATION 200038

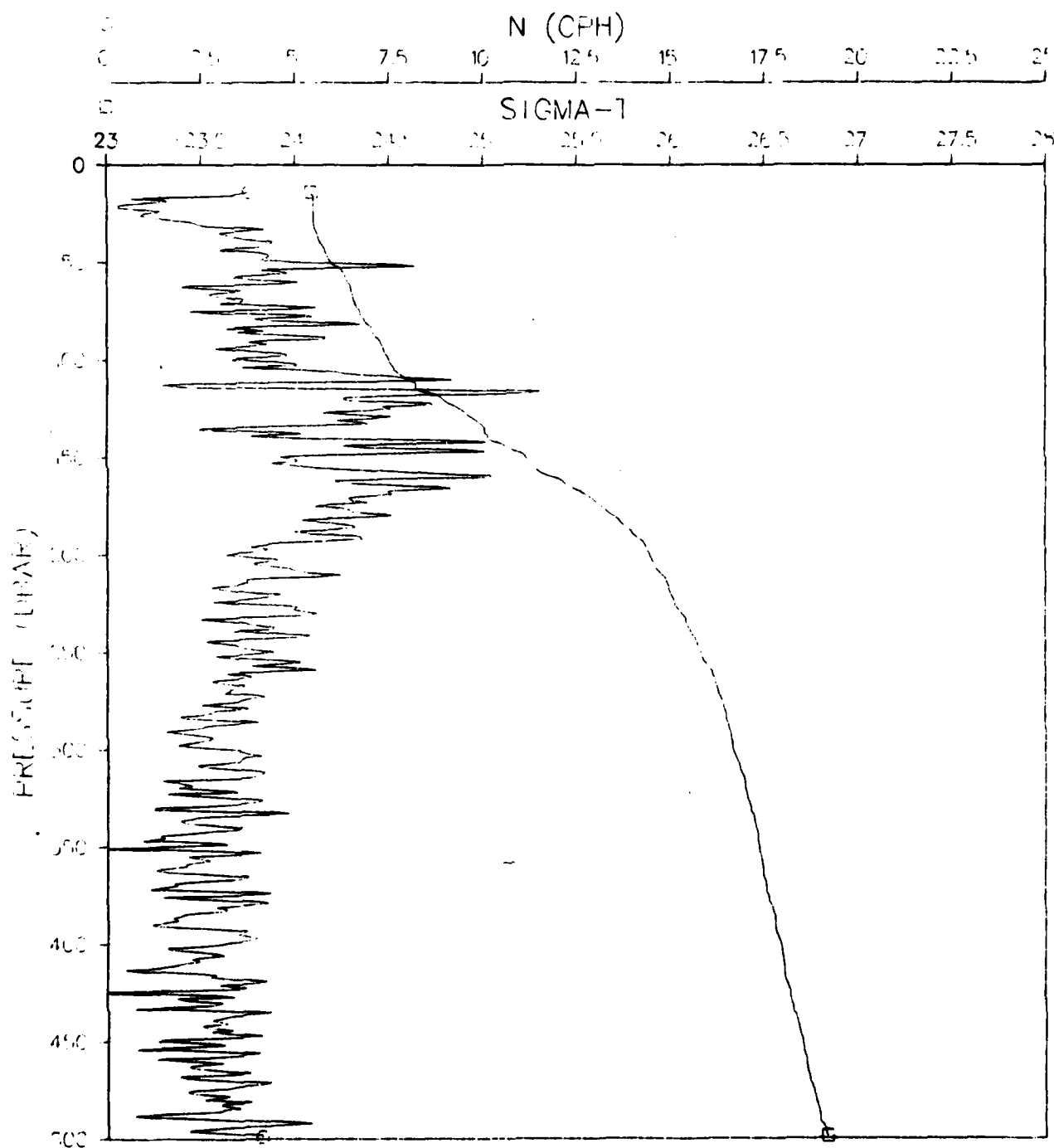


Figure 446.

ATOM 79 RECOVERY
STATION 200039

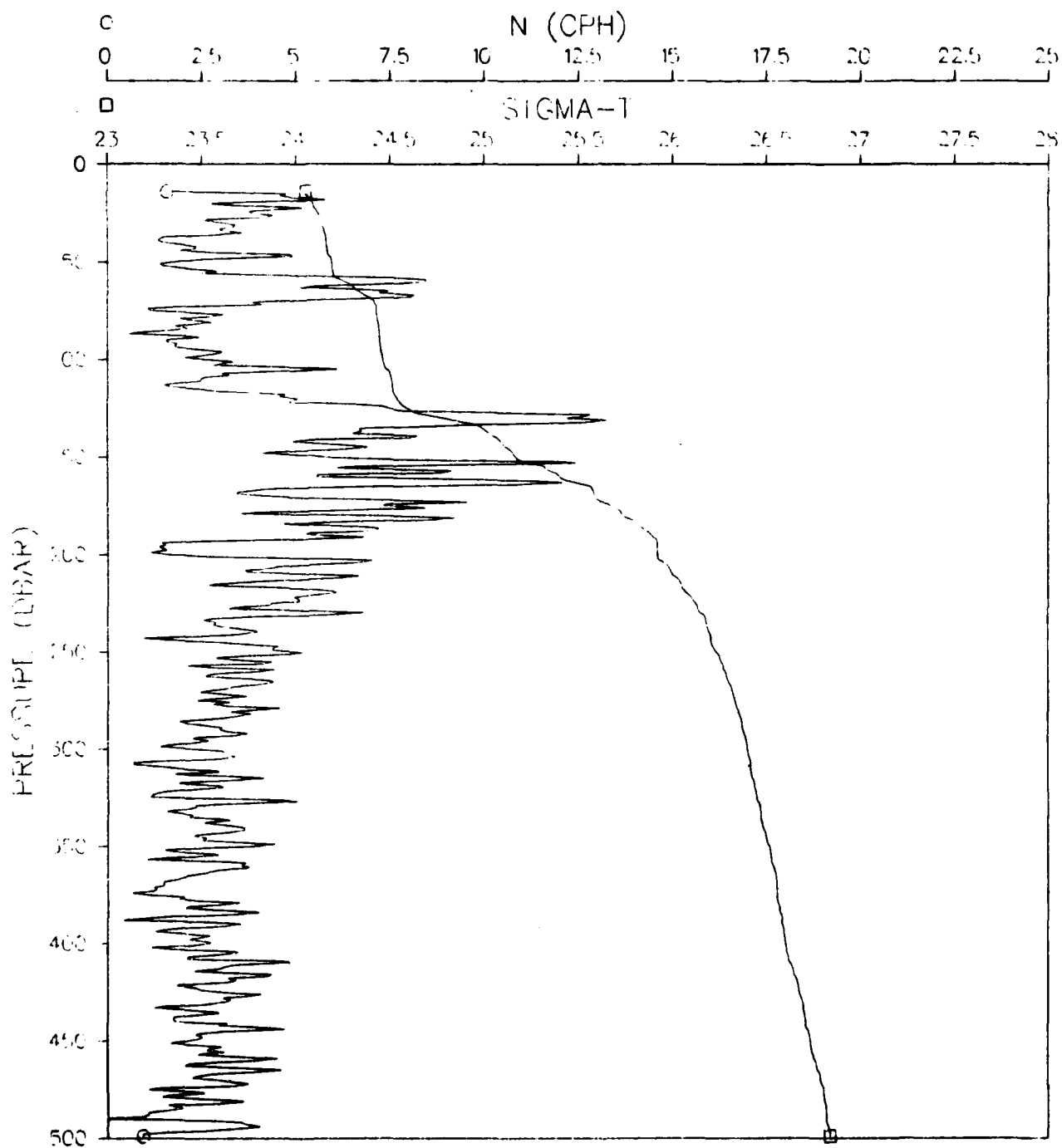


Figure 447.

ATOM 79 RECOVERY
STATION 200040

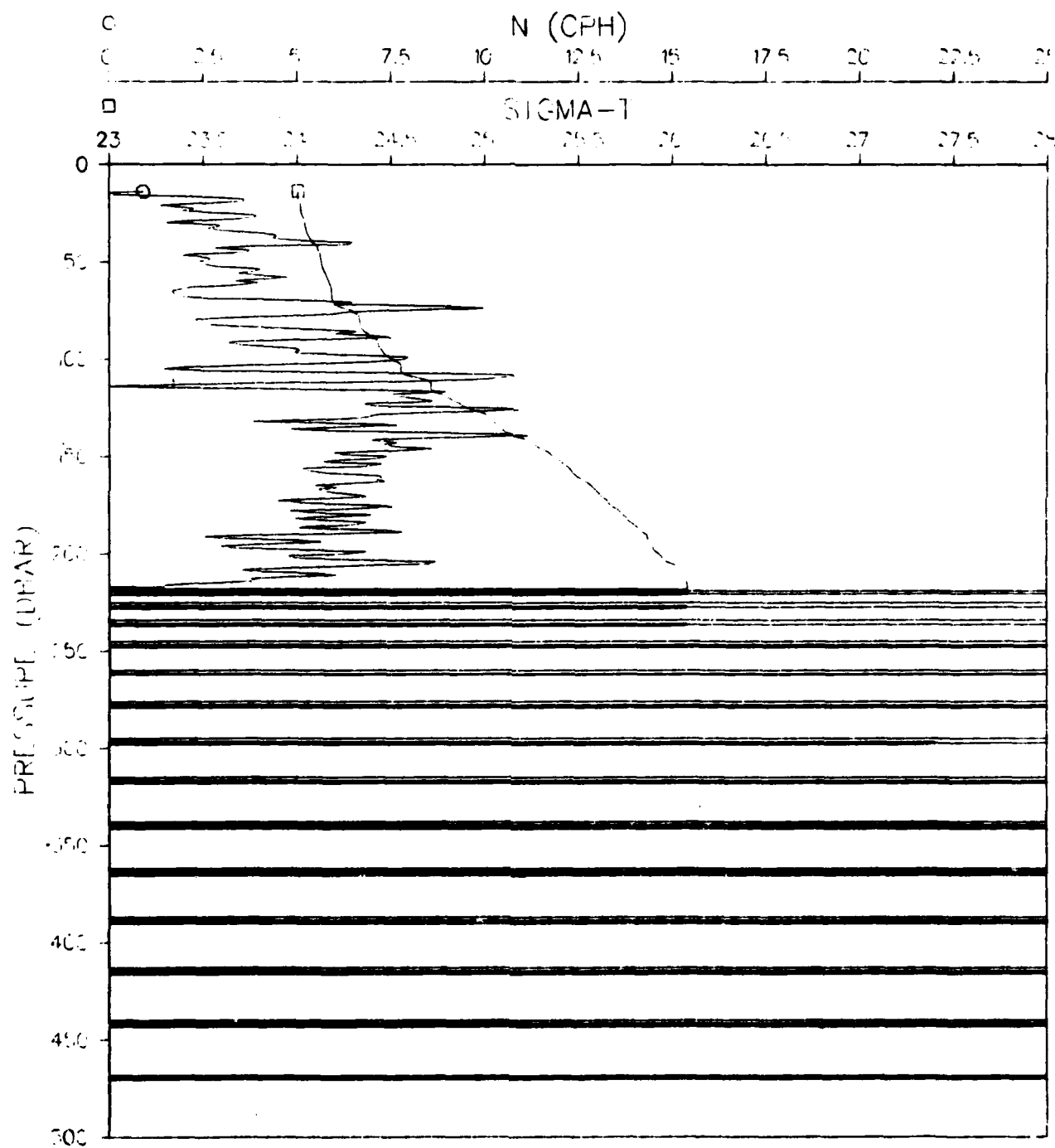


Figure 448.

ATOM 79 RECOVERY
STATION 200041

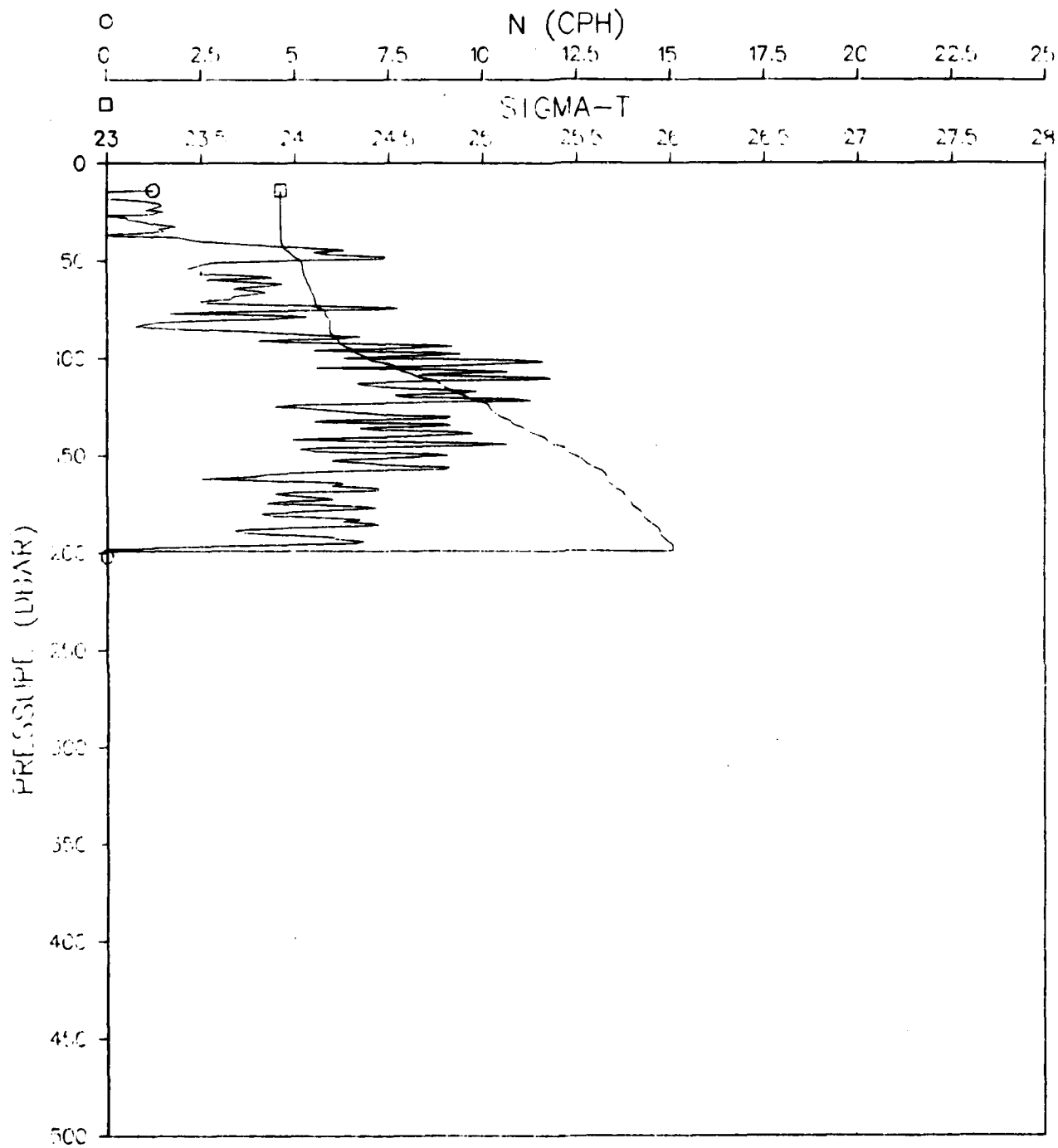


Figure 449.

ATOM 79 RECOVERY
STATION 200001

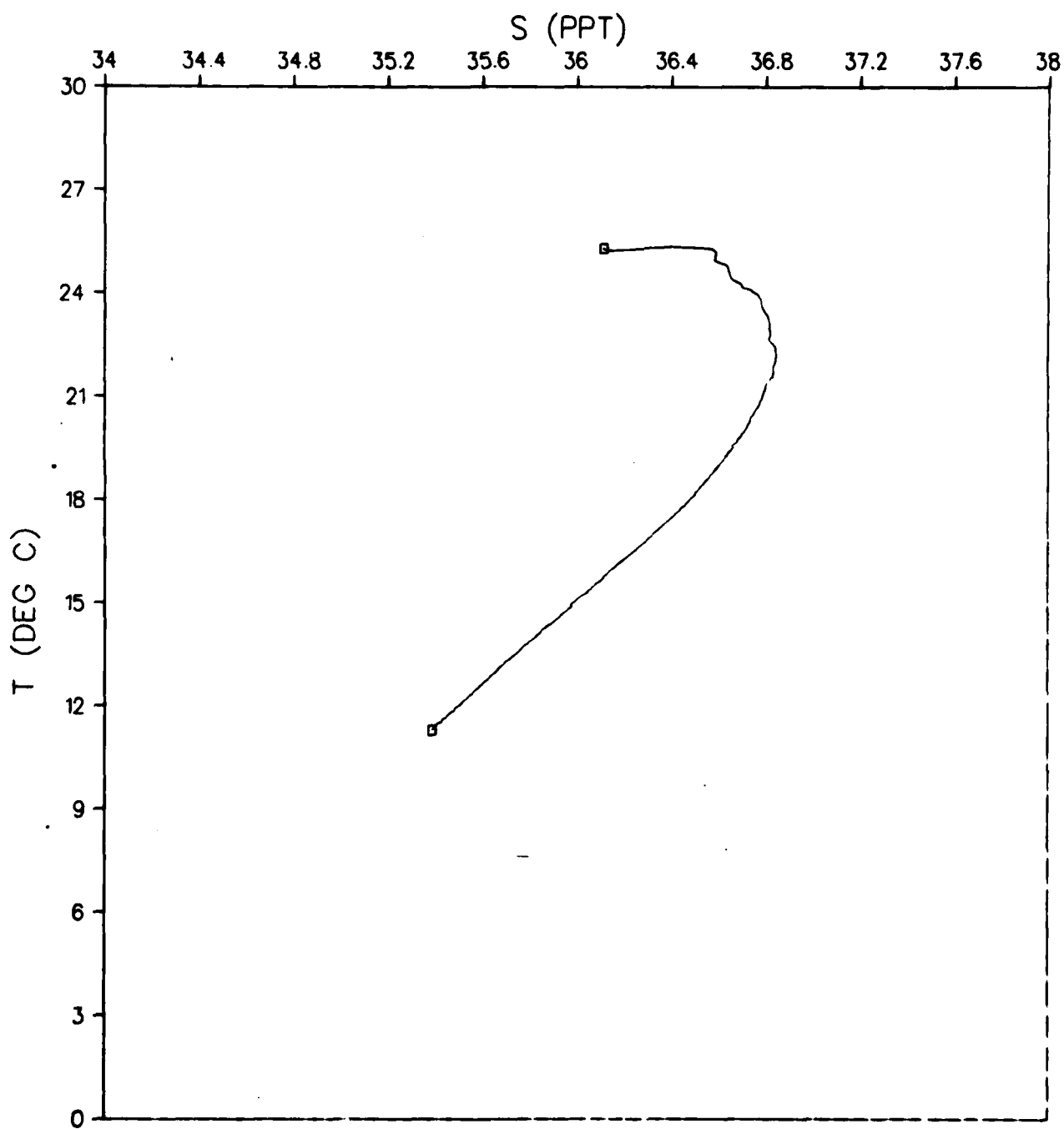


Figure 450.

ATOM 79 RECOVERY
STATION 200002

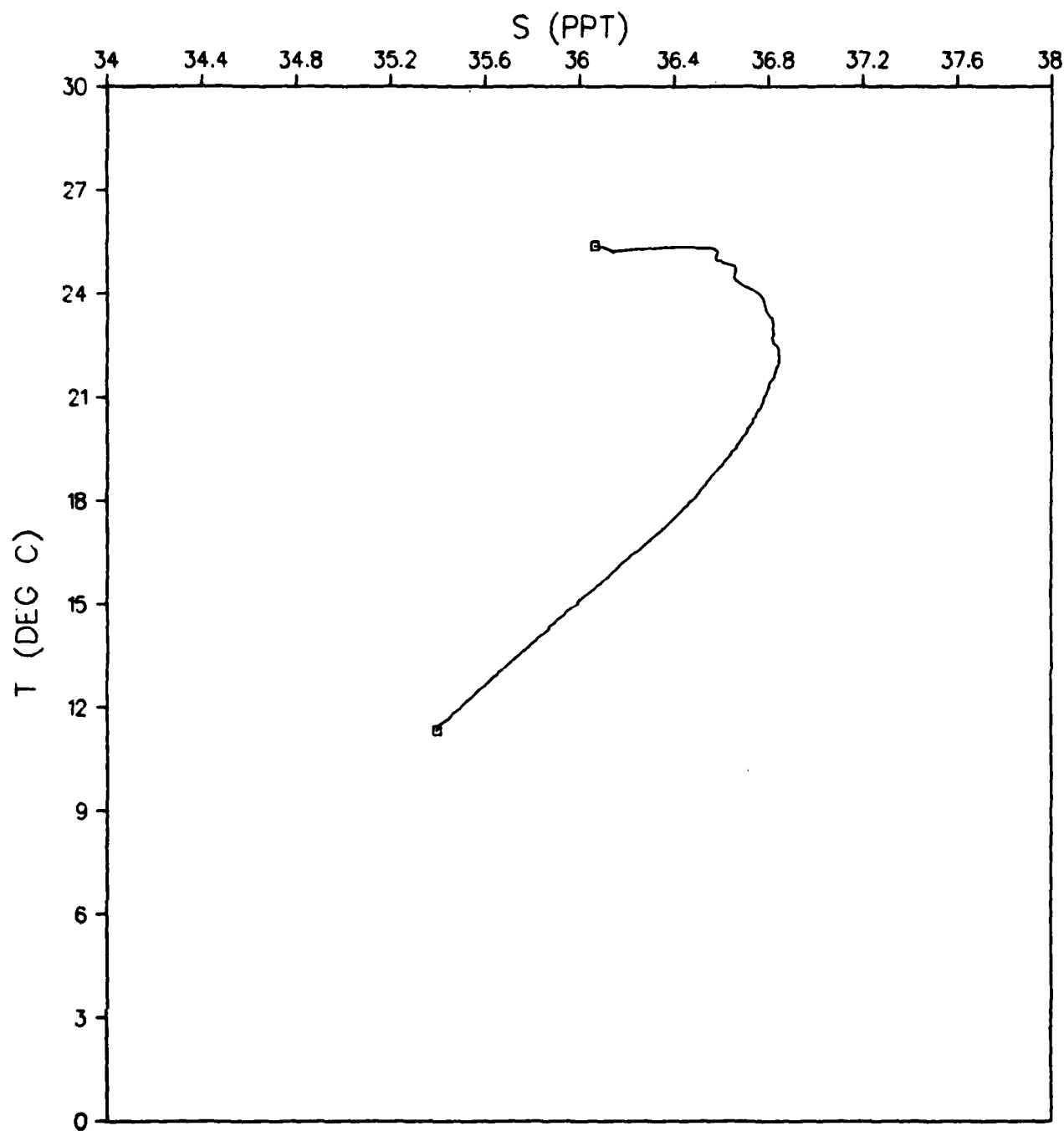


Figure 451.

ATOM 79 RECOVERY
STATION 200003

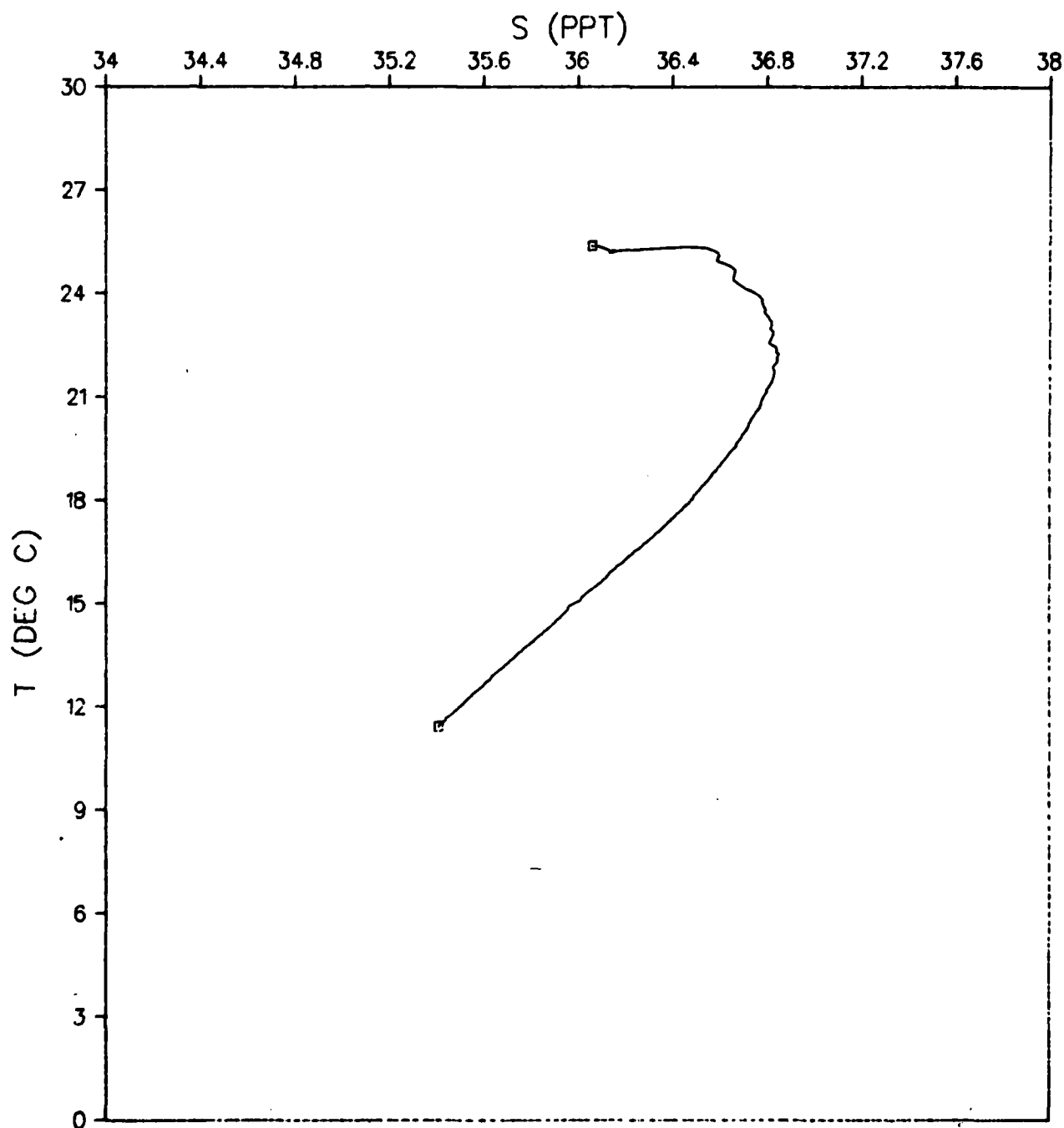


Figure 452.

ATOM 79 RECOVERY
STATION 200004

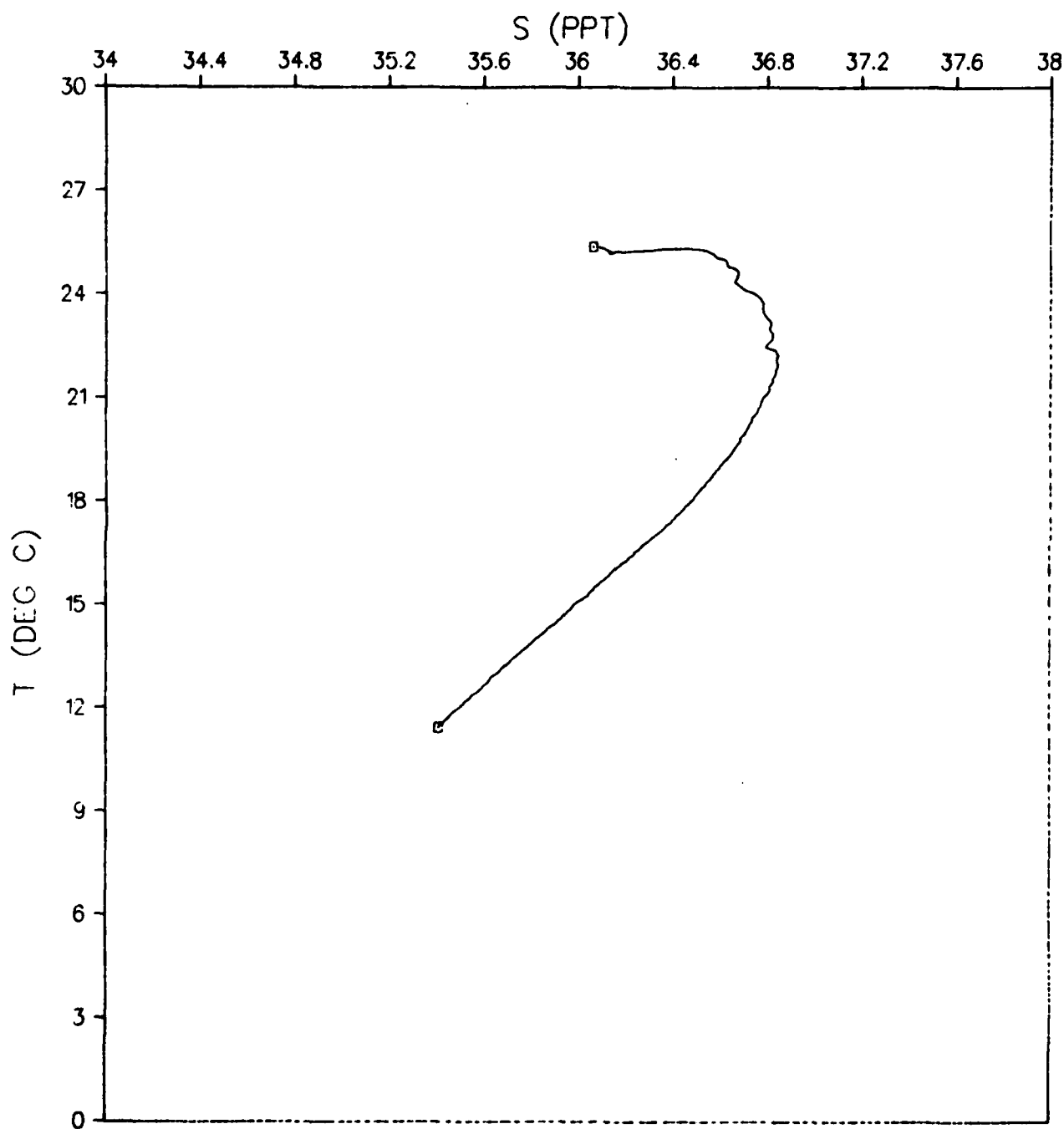


Figure 453.

ATOM 79 RECOVERY
STATION 200005

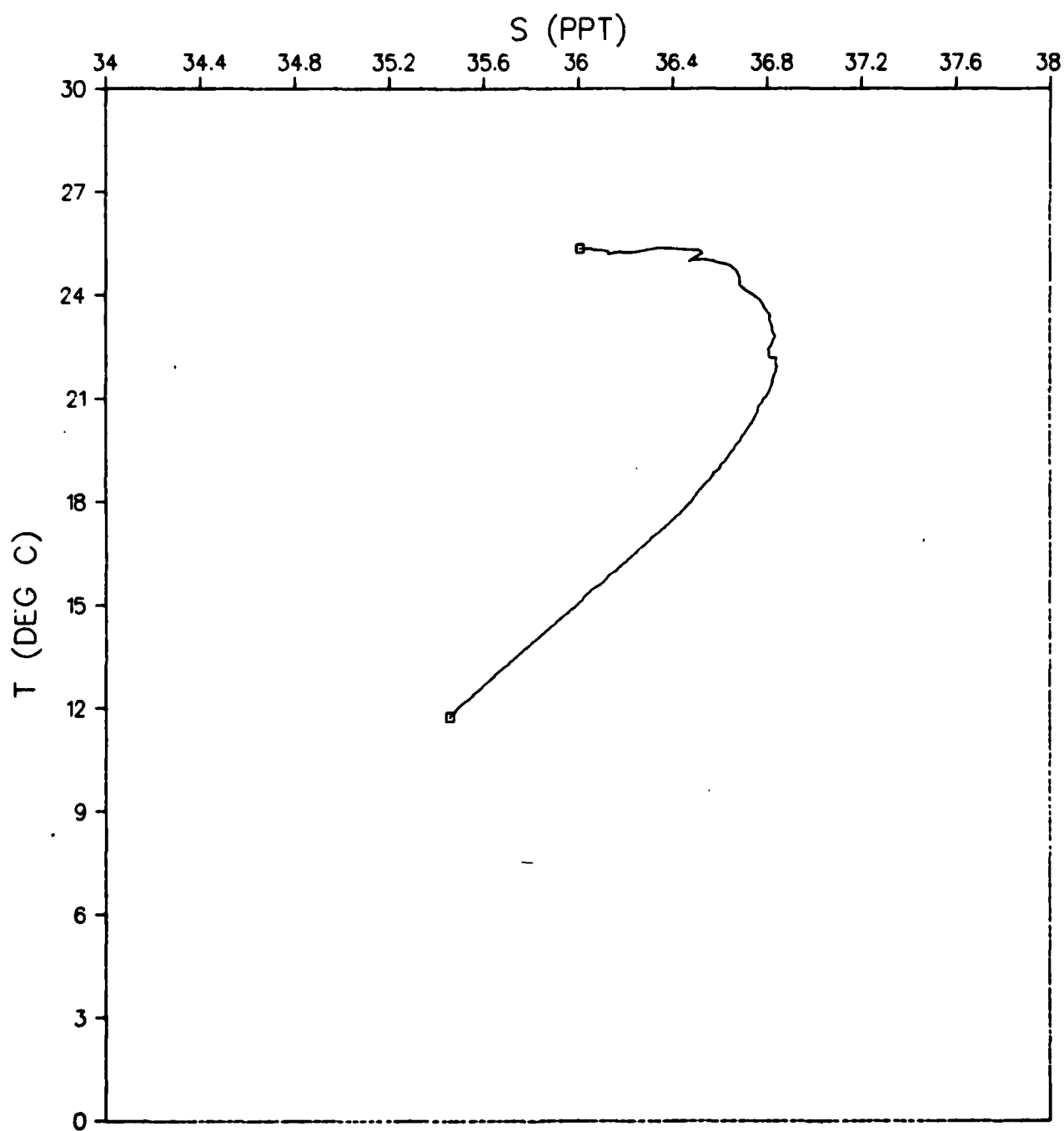


Figure 454.

ATOM 79 RECOVERY
STATION 200006

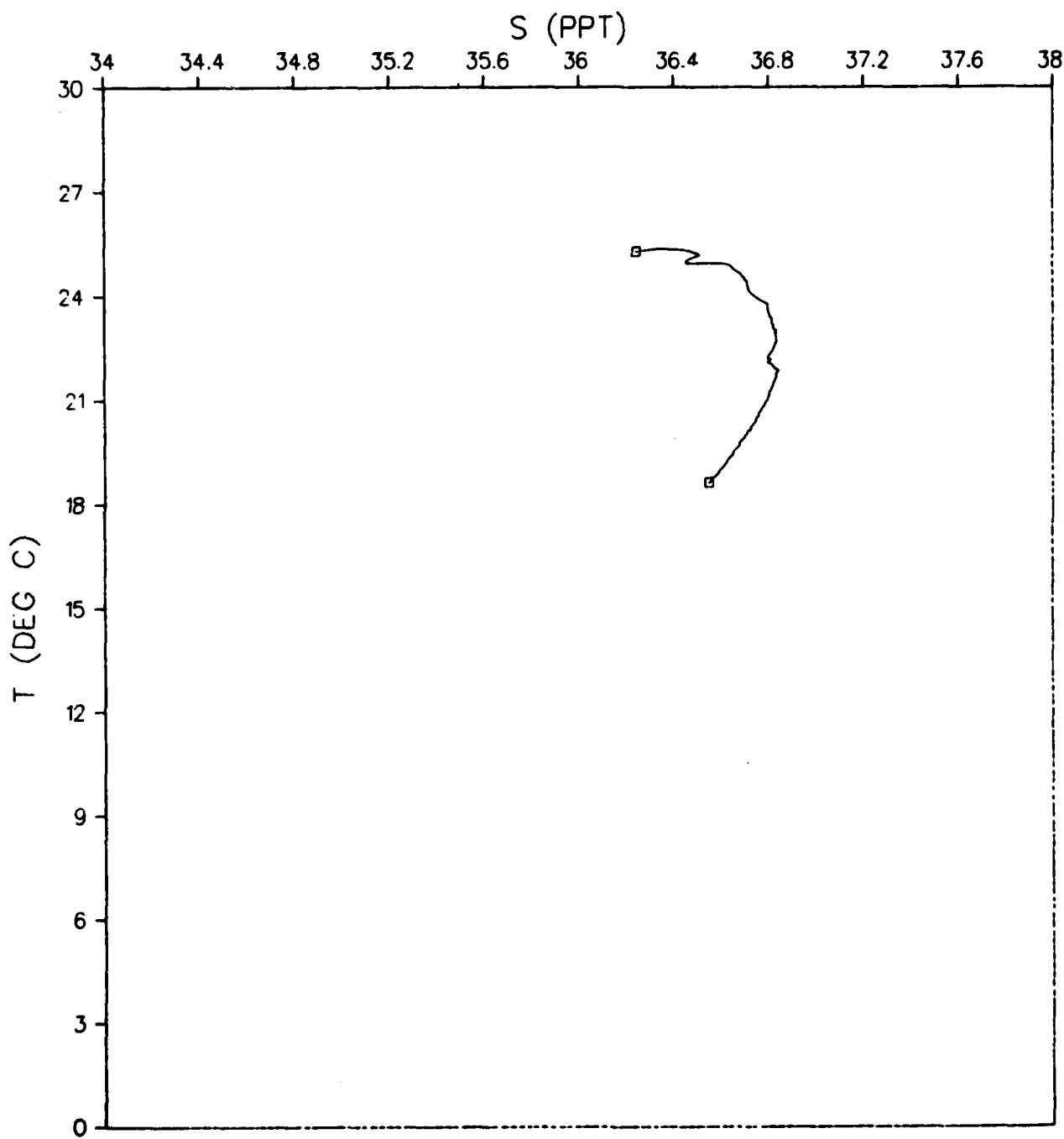


Figure 455.

ATOM 79 RECOVERY
STATION 200007

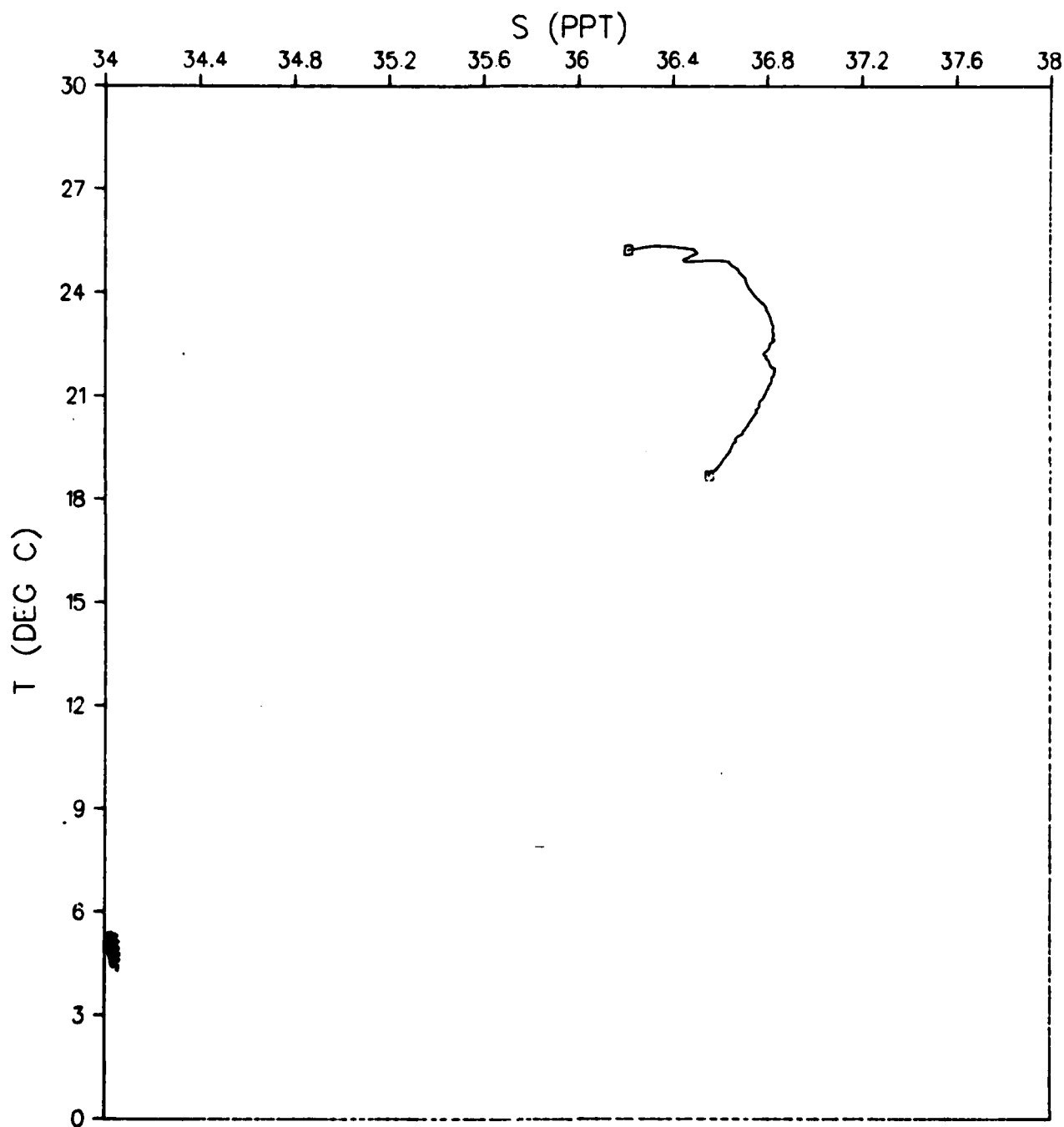


Figure 456.

ATOM 79 RECOVERY
STATION 200008

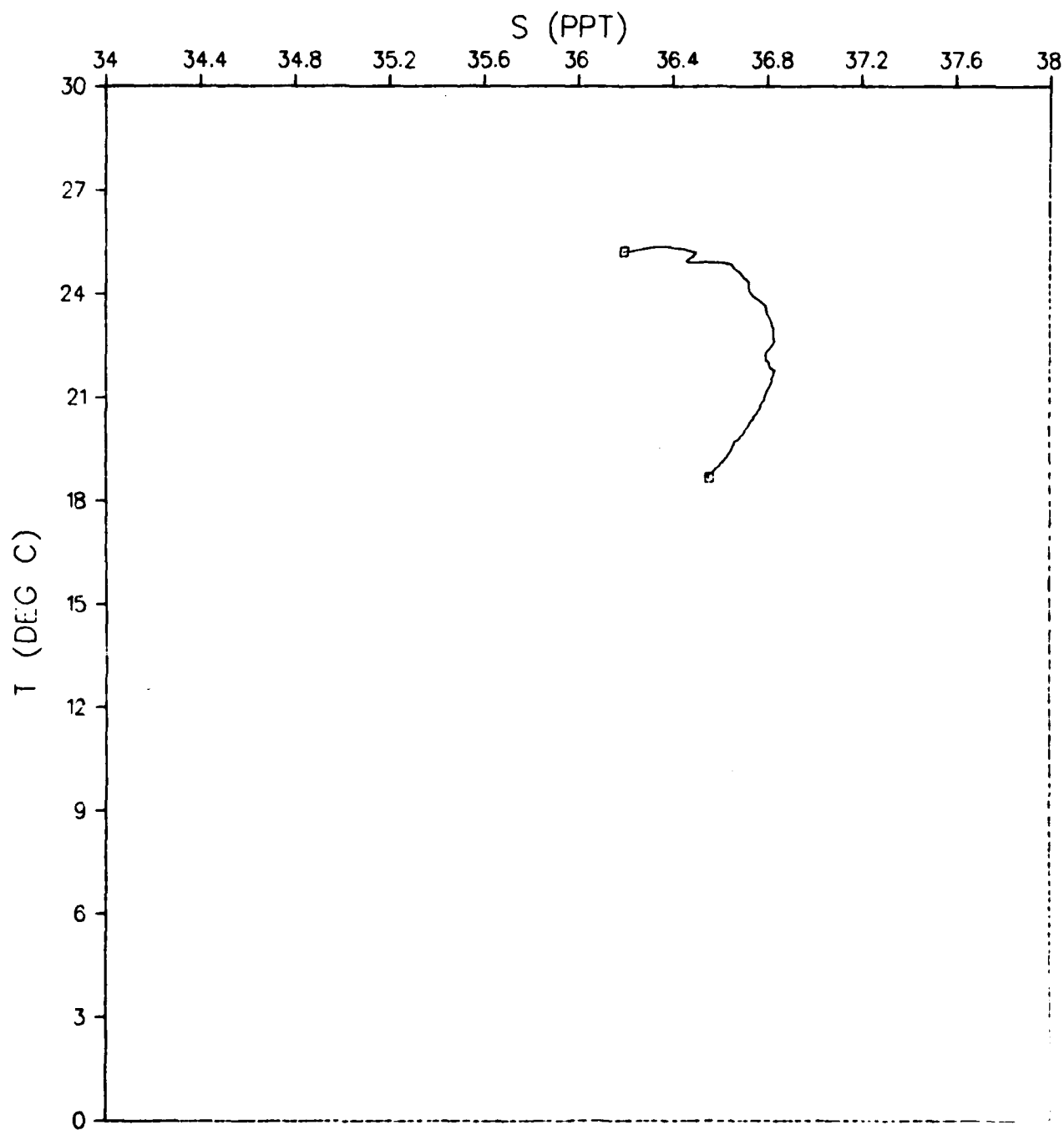


Figure 457.

AD-A096 910

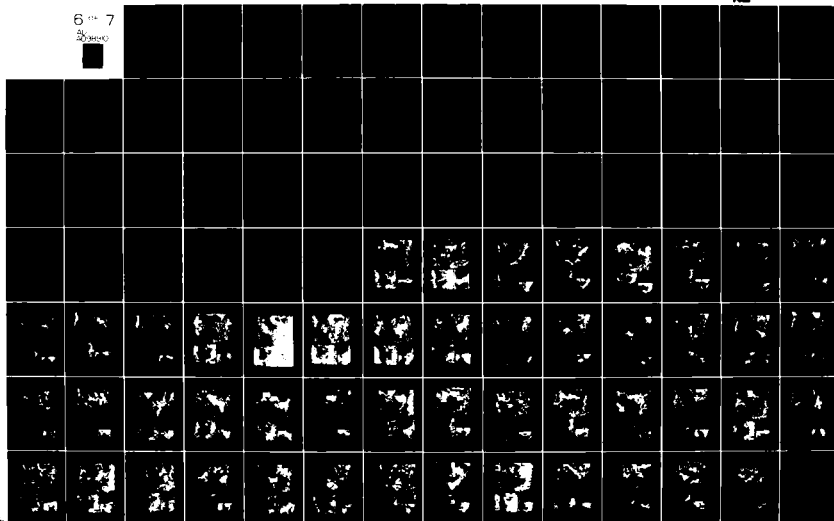
NAVAL OCEAN RESEARCH AND DEVELOPMENT ACTIVITY NSTL S--ETC F/6 8/3
A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC/
OCT 80 K D SAUNDERS, A W GREEN, M Y BERGIN
NORDA-TN-85

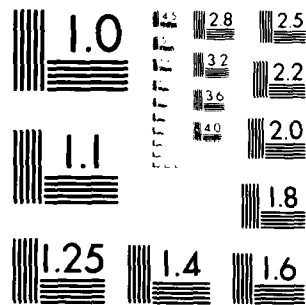
UNCLASSIFIED

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

ATOM 79 RECOVERY
STATION 200009

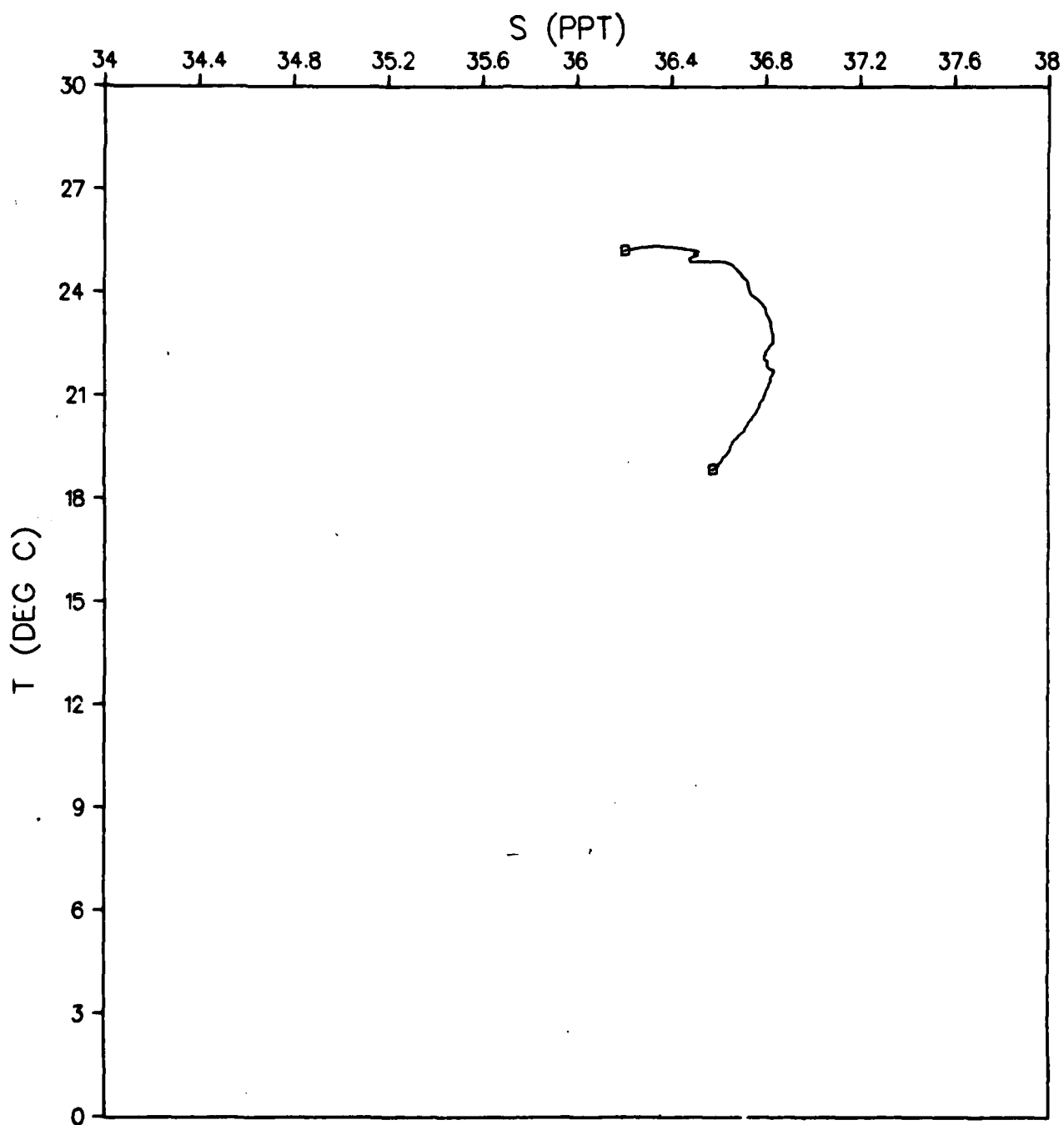


Figure 458.

ATOM 79 RECOVERY
STATION 200010

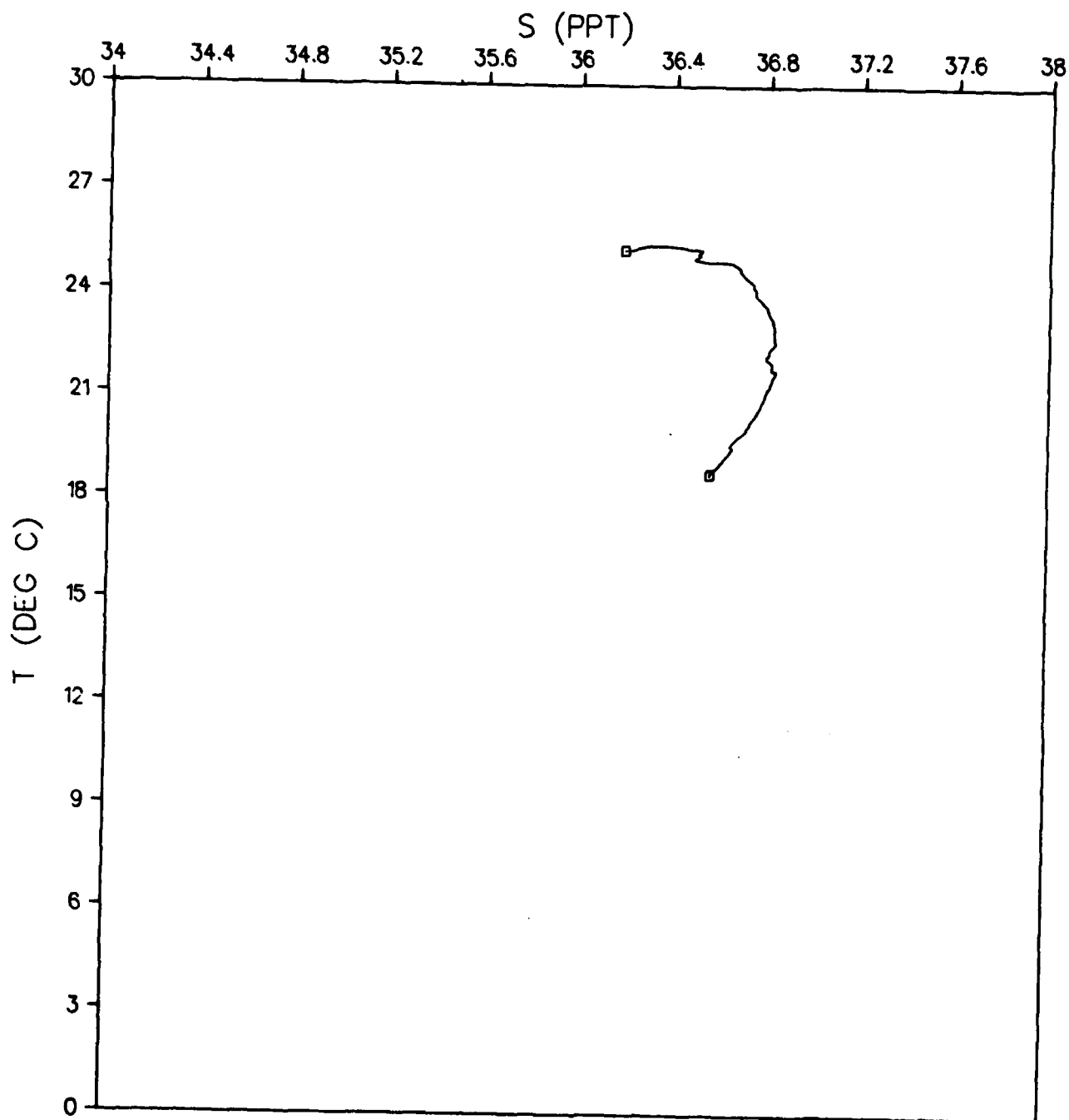


Figure 459.

ATOM 79 RECOVERY
STATION 200011

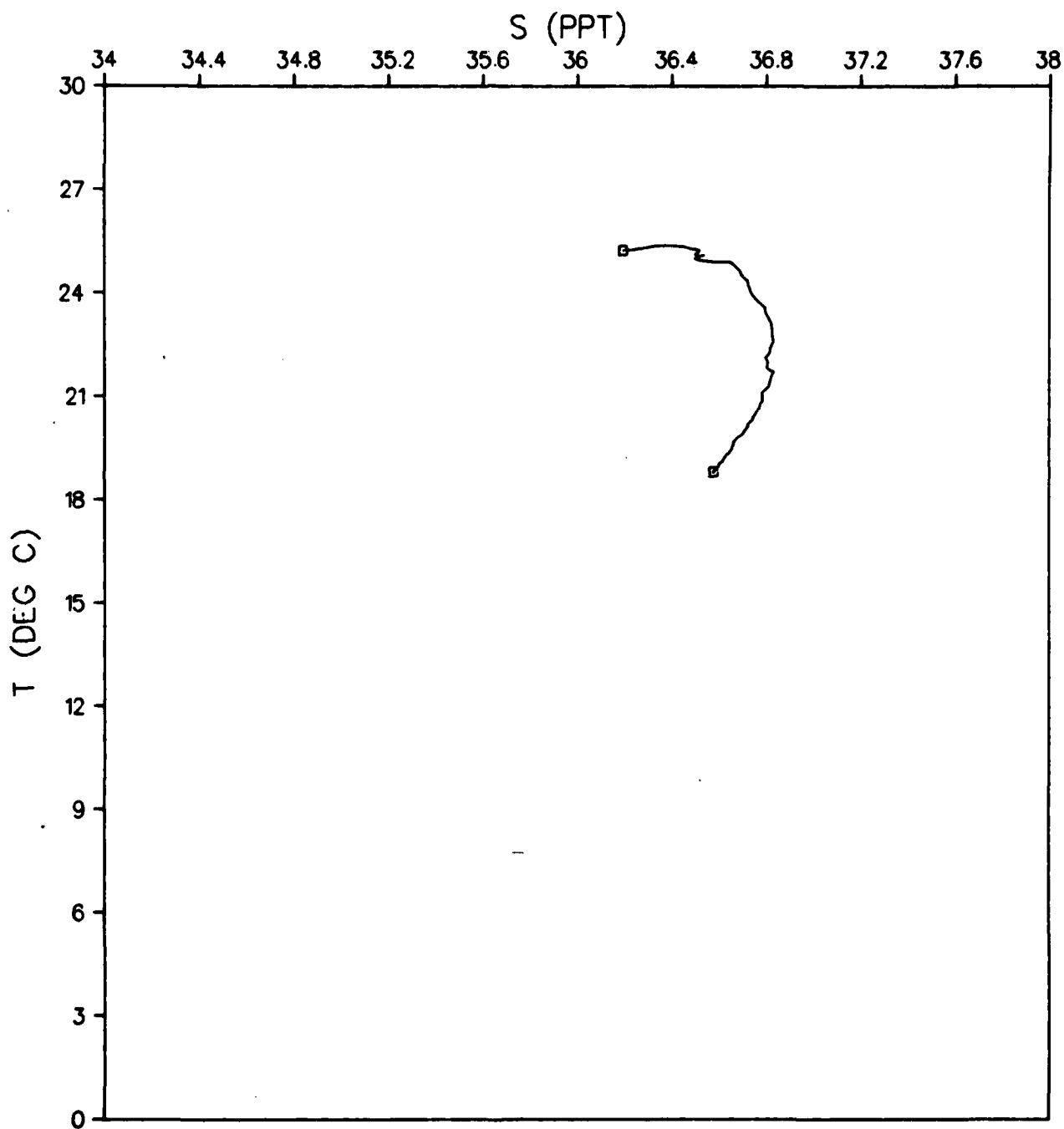


Figure 460.

ATOM 79 RECOVERY
STATION 200012

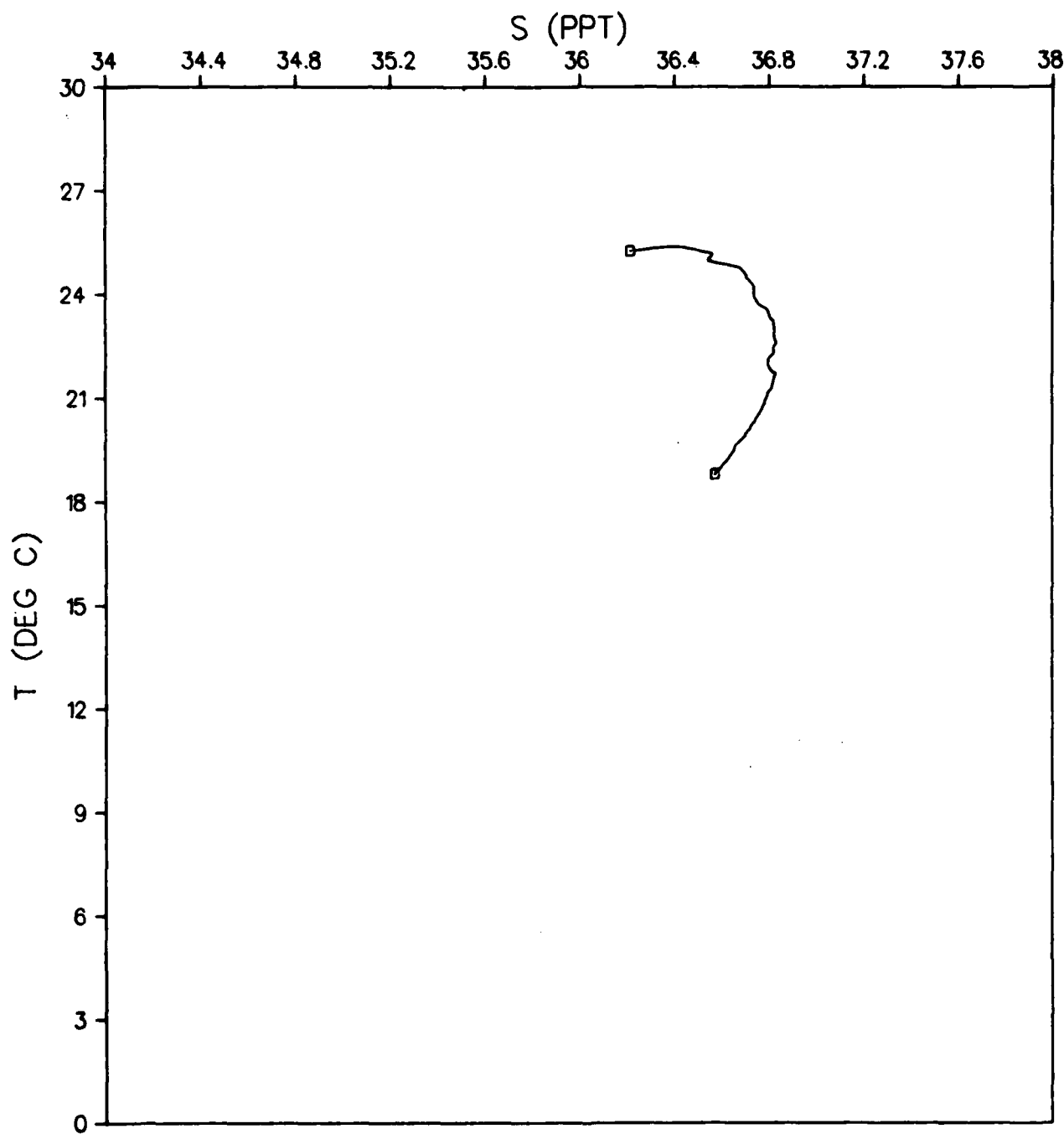


Figure 461.

ATOM 79 RECOVERY
STATION 200013

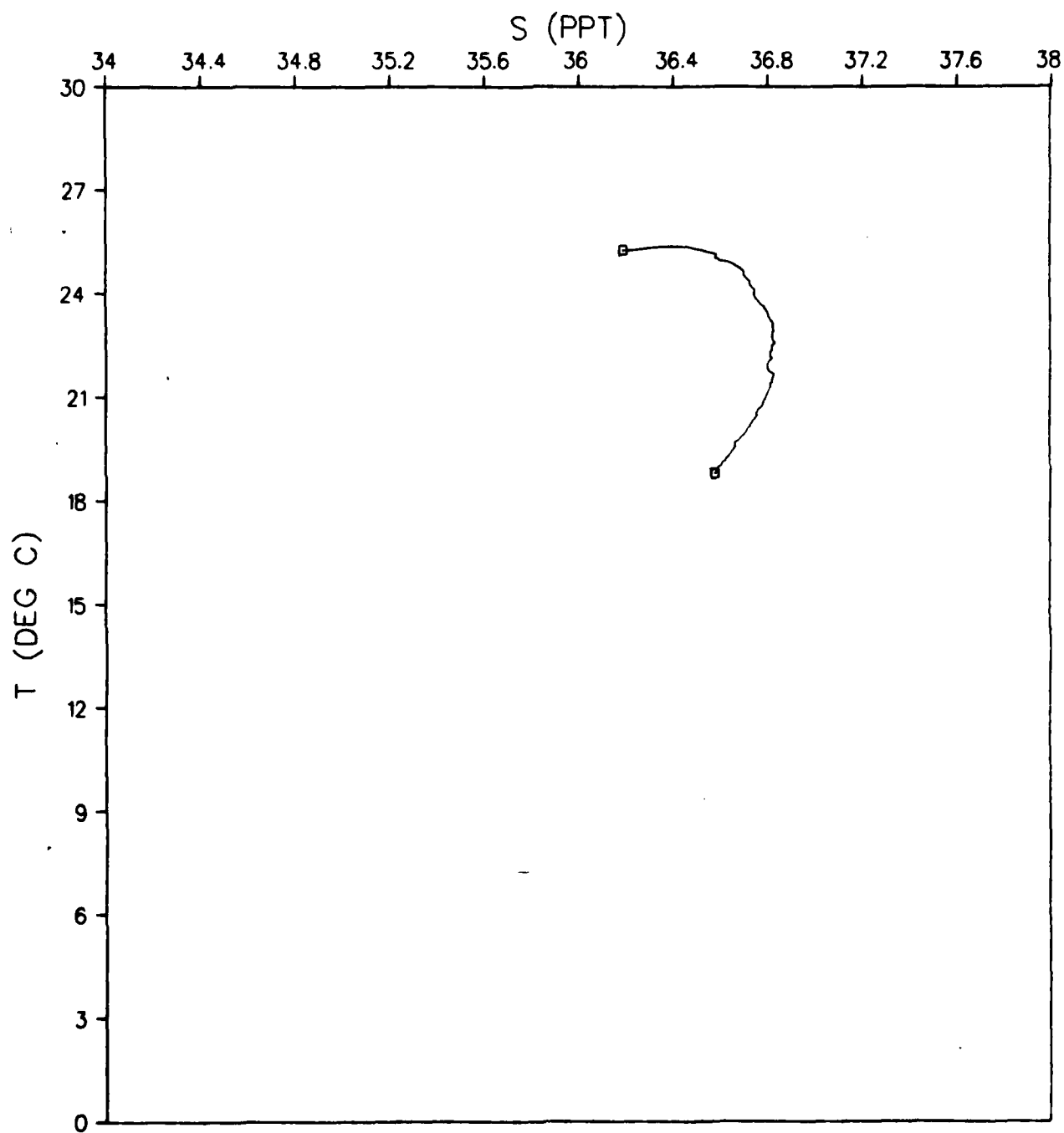


Figure 462.

ATOM 79 RECOVERY
STATION 200014

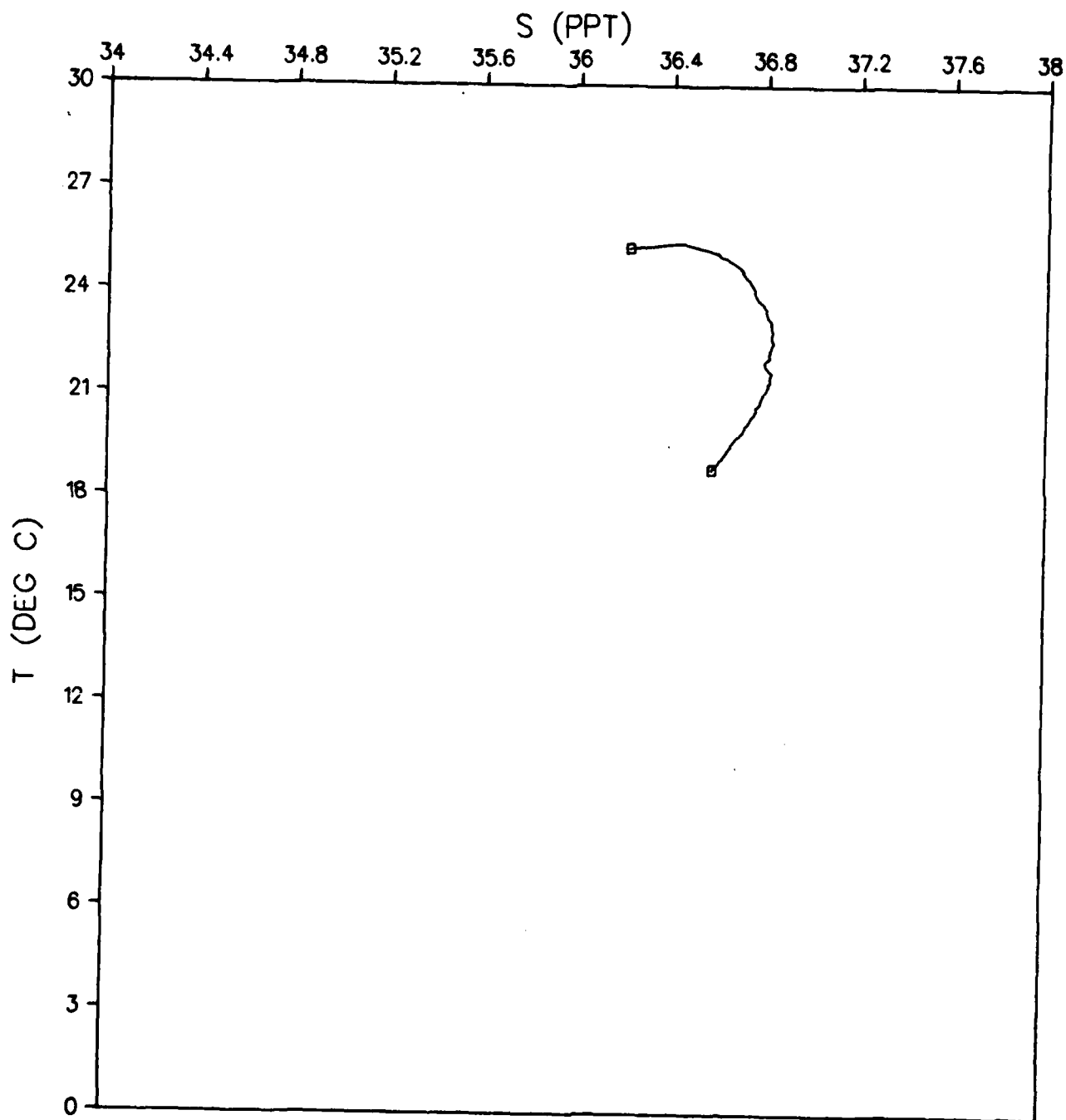


Figure 463.

ATOM 79 RECOVERY
STATION 200015

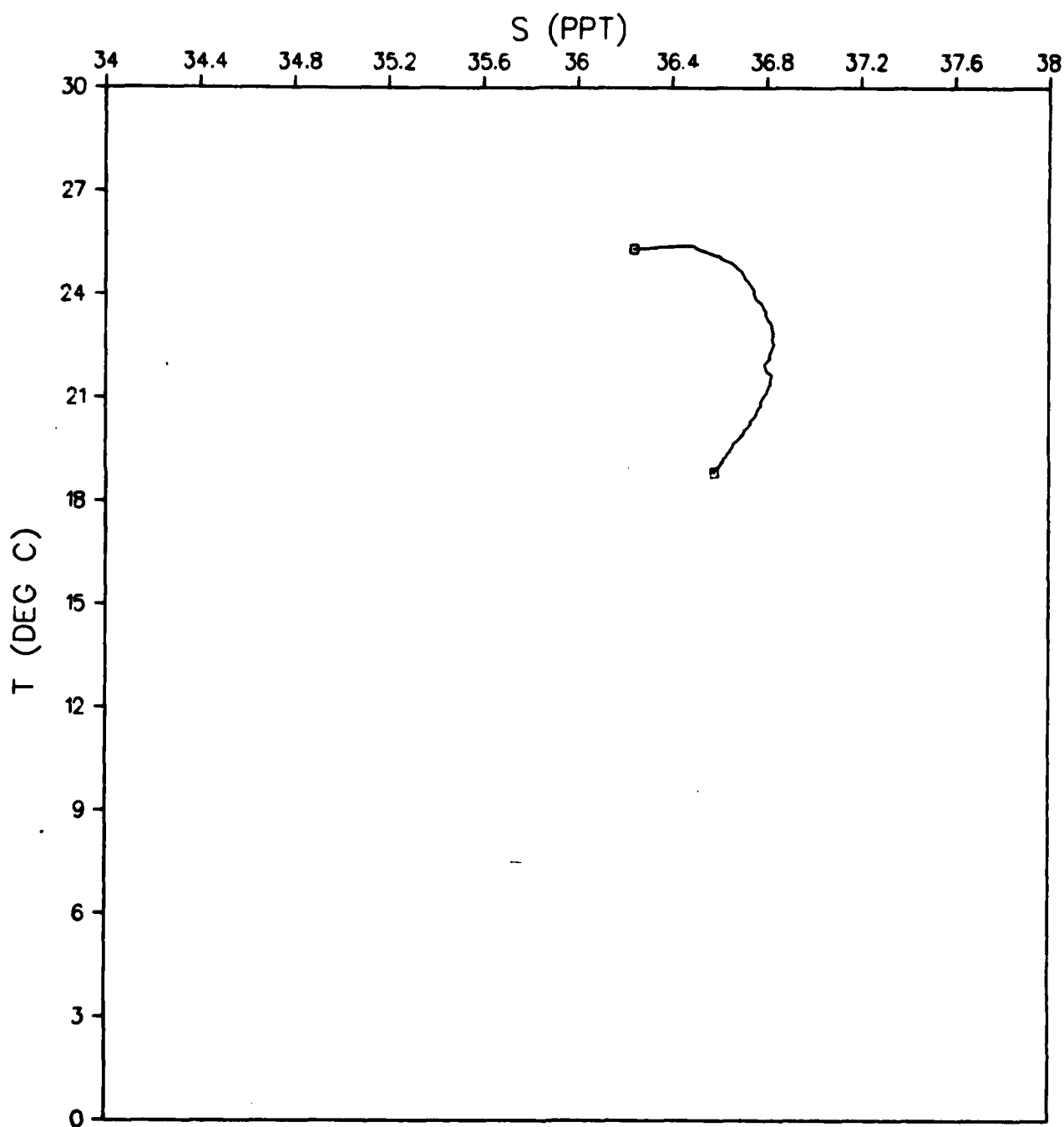


Figure 464.

ATOM 79 RECOVERY
STATION 200016

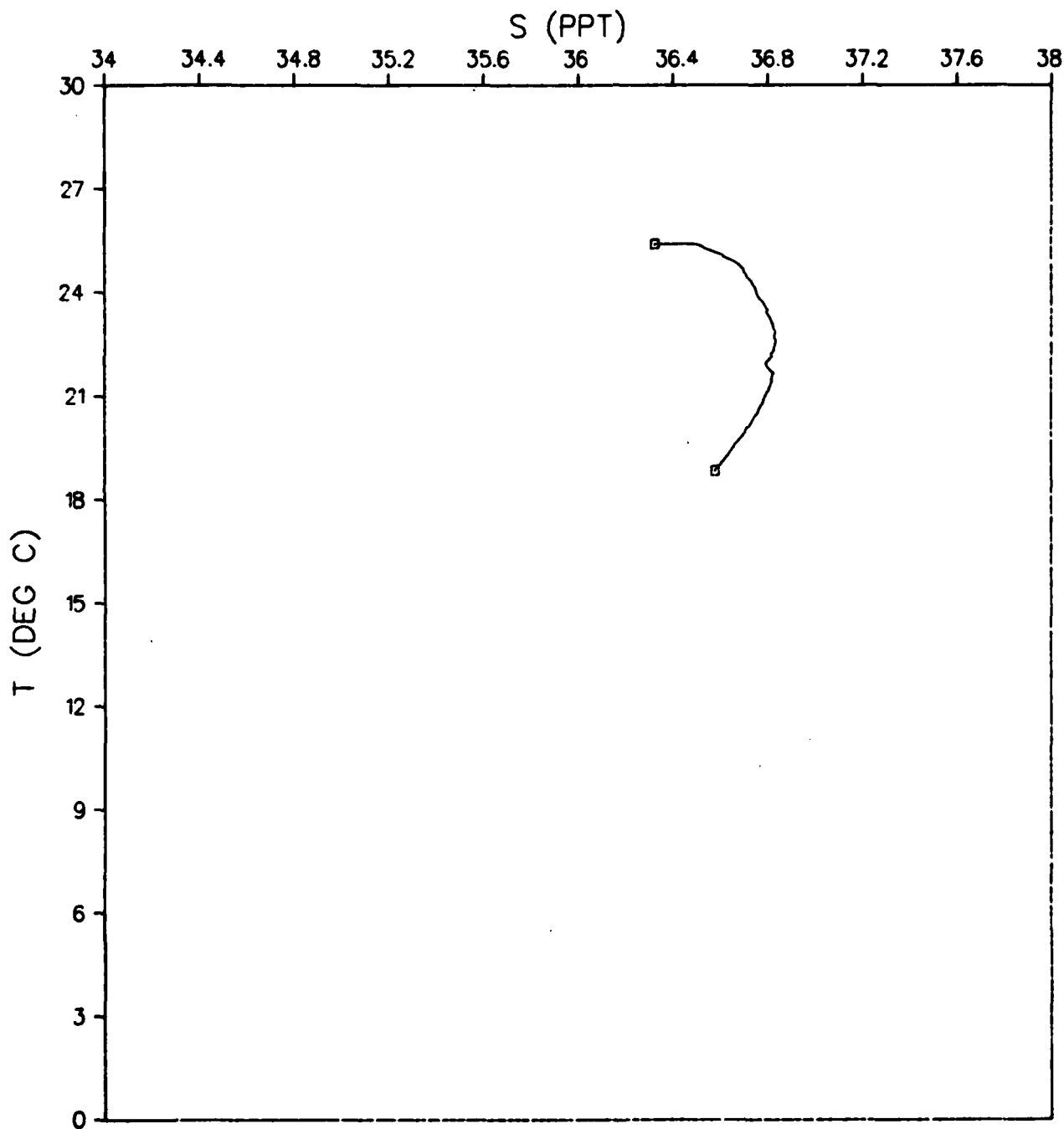


Figure 465.

ATOM 79 RECOVERY
STATION 200017

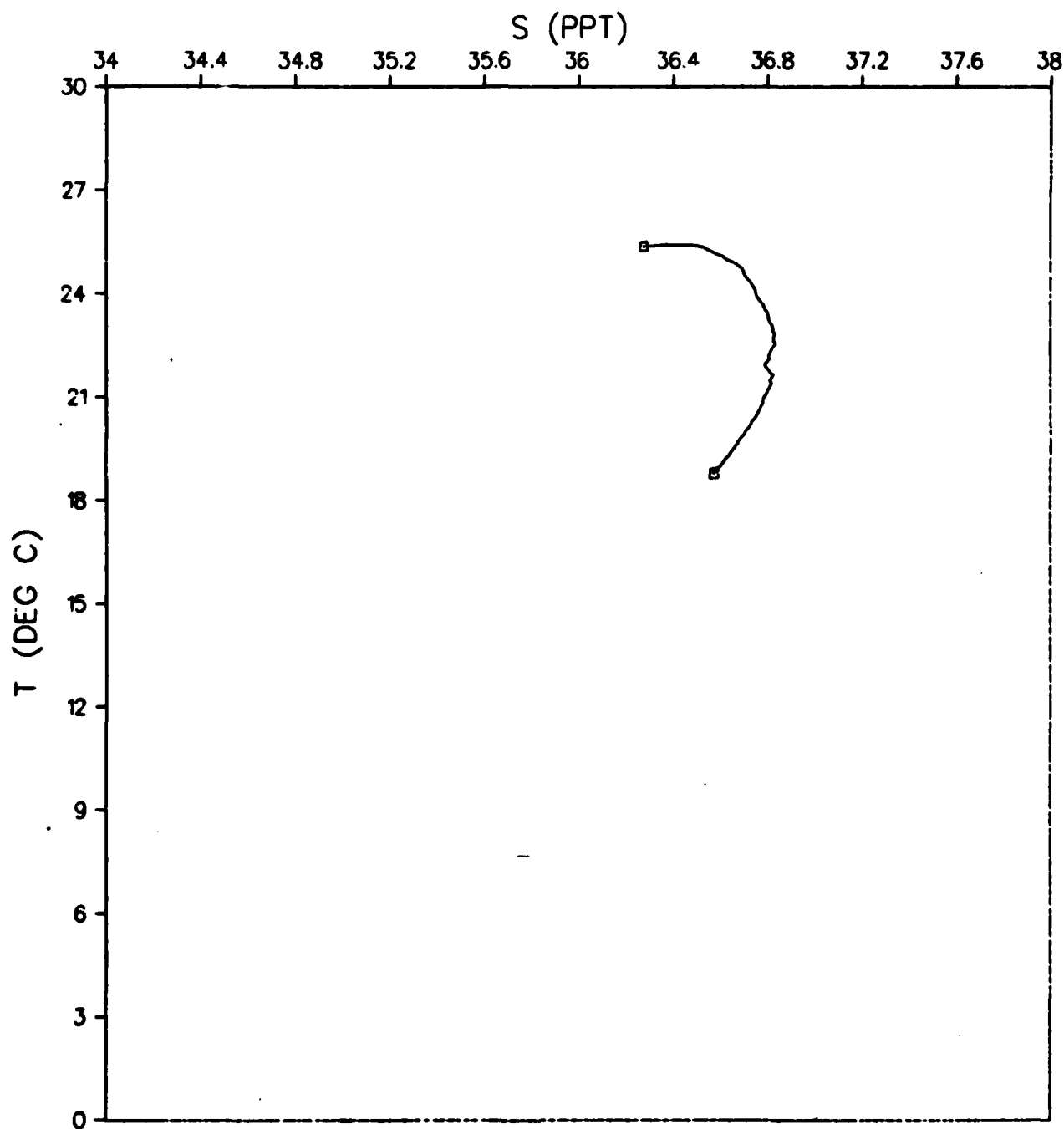


Figure 466.

ATOM 79 RECOVERY
STATION 200018

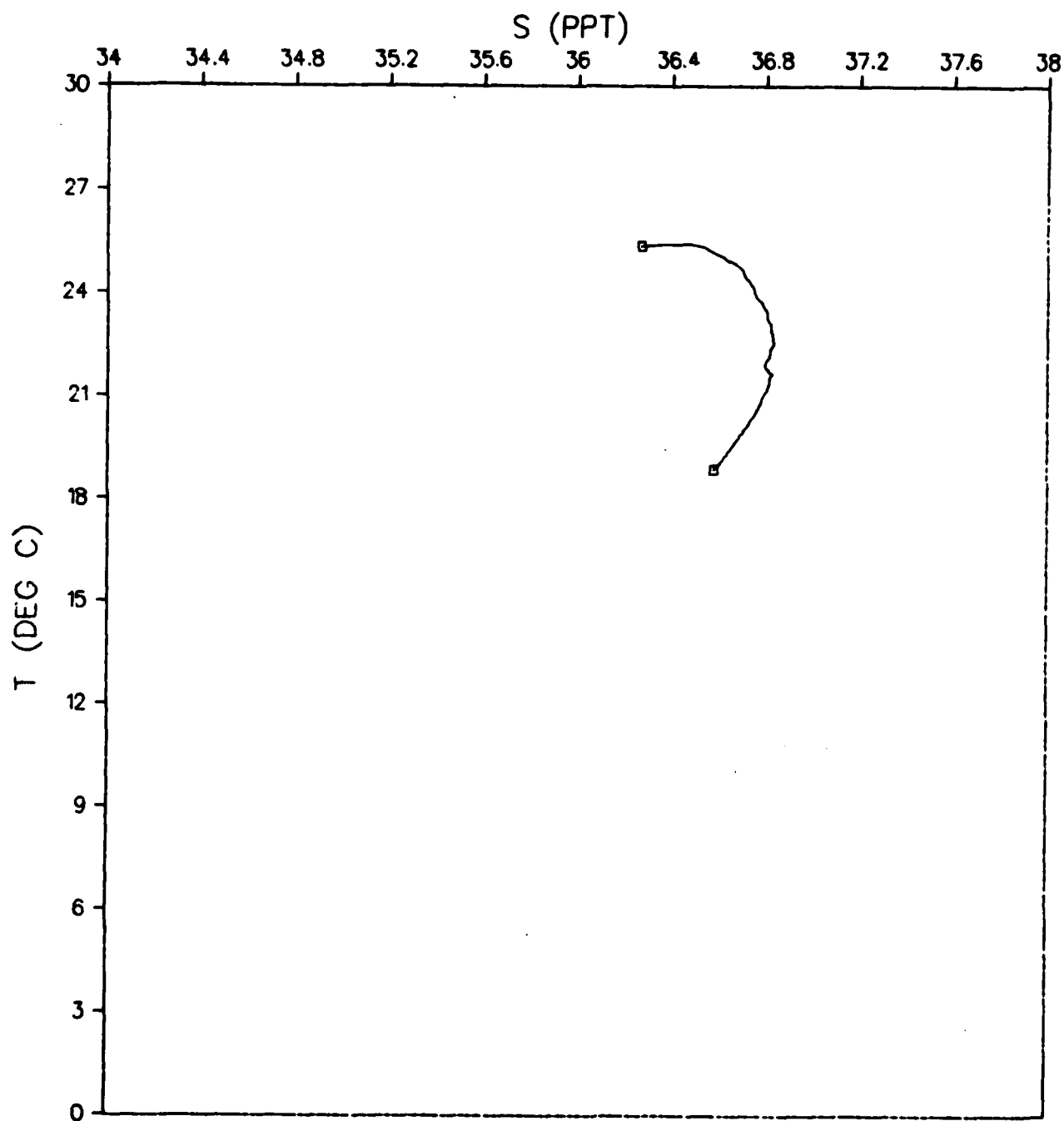


Figure 467.

ATOM 79 RECOVERY
STATION 200019

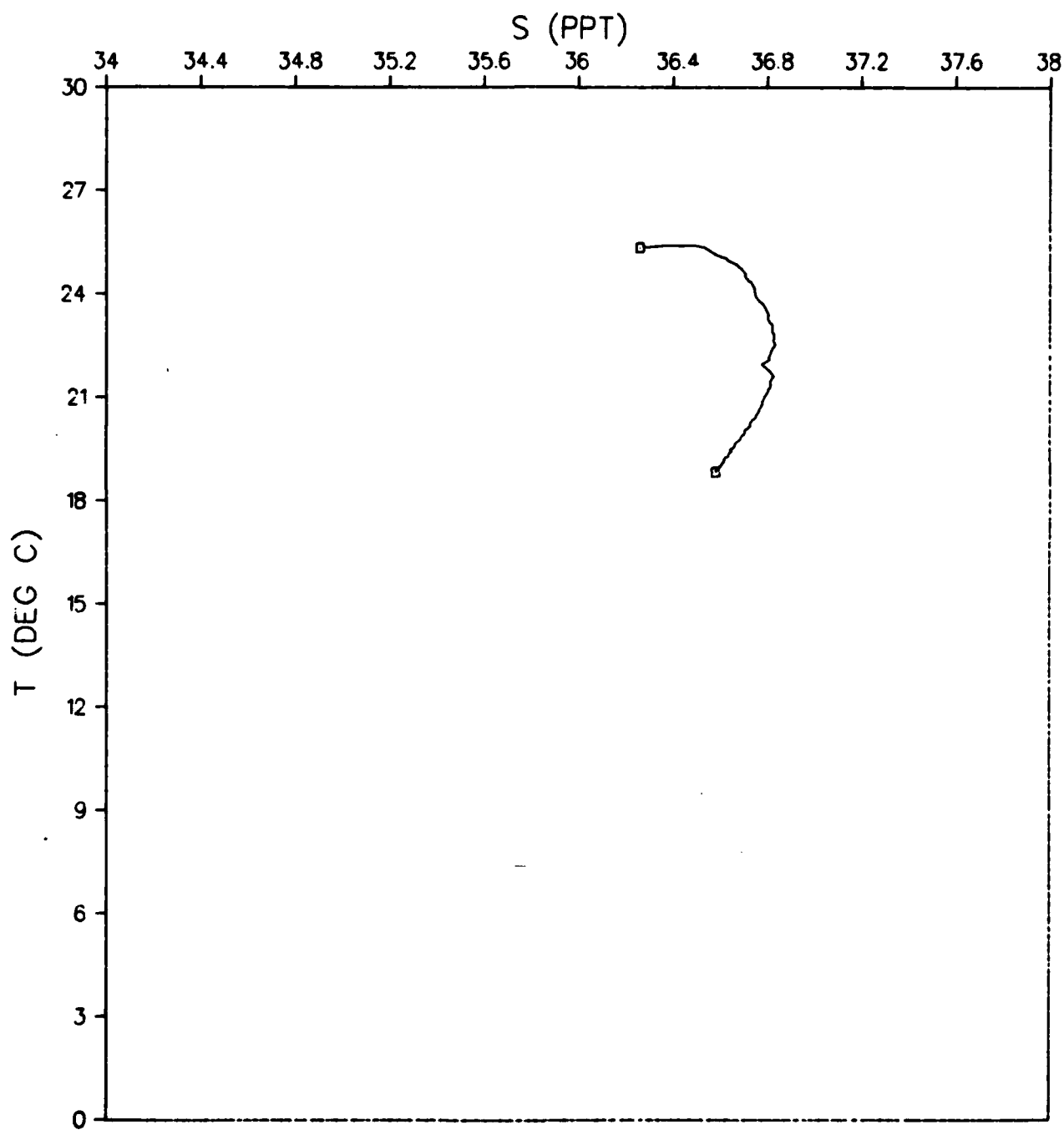


Figure 468.

ATOM 79 RECOVERY
STATION 200020

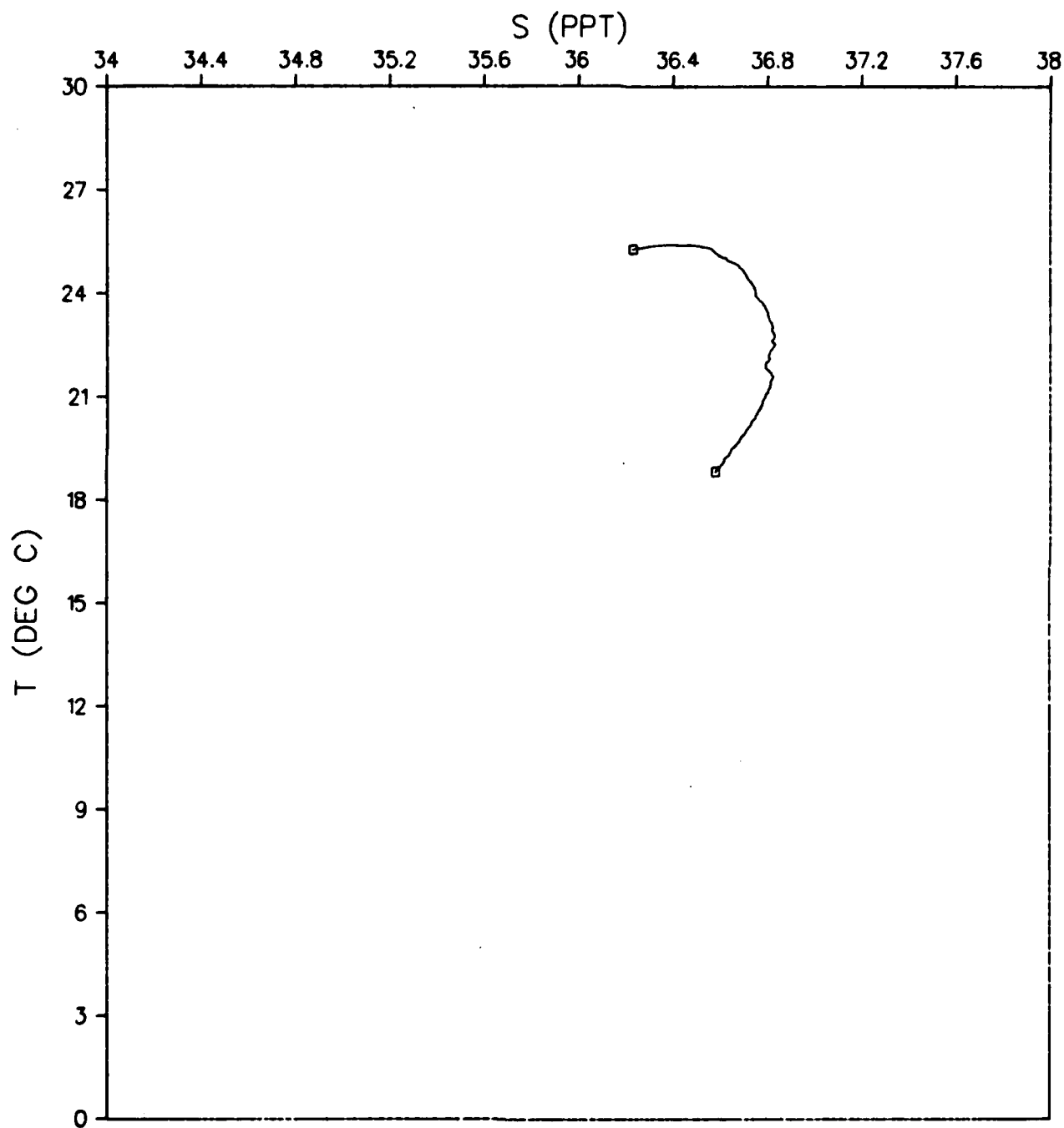


Figure 469.

ATOM 79 RECOVERY
STATION 200021

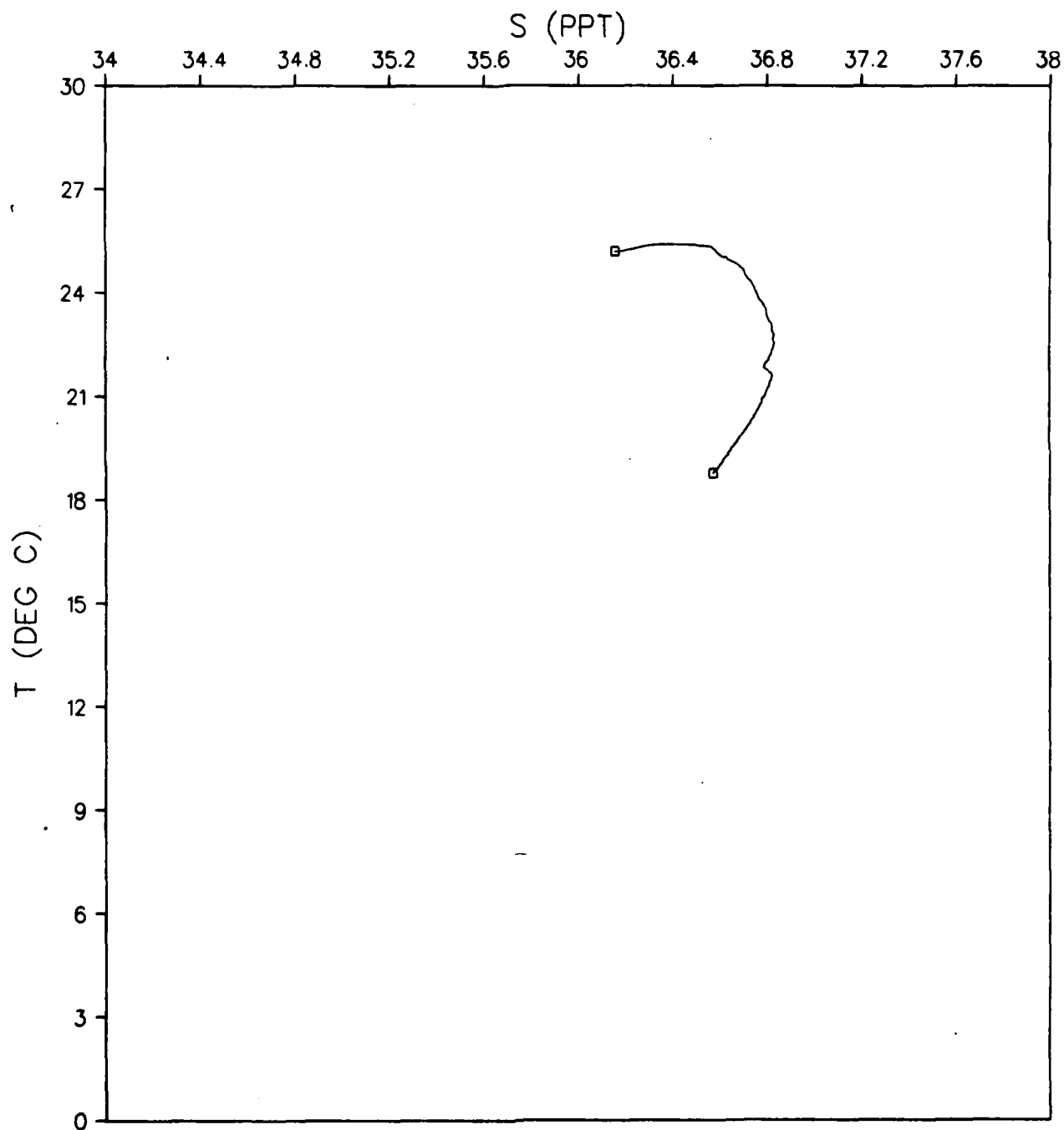


Figure 470.

ATOM 79 RECOVERY
STATION 200022

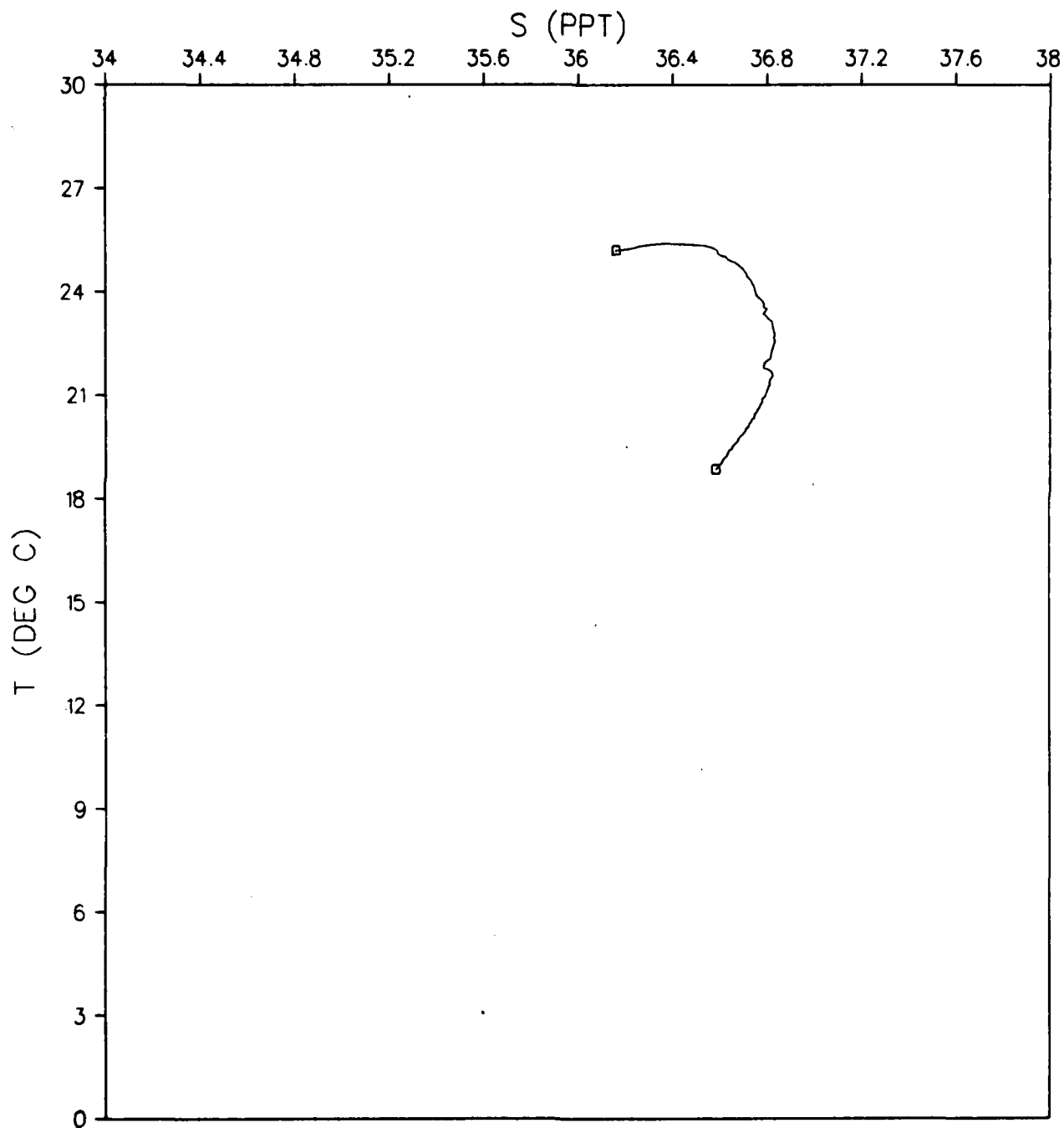


Figure 471.

ATOM 79 RECOVERY
STATION 200023

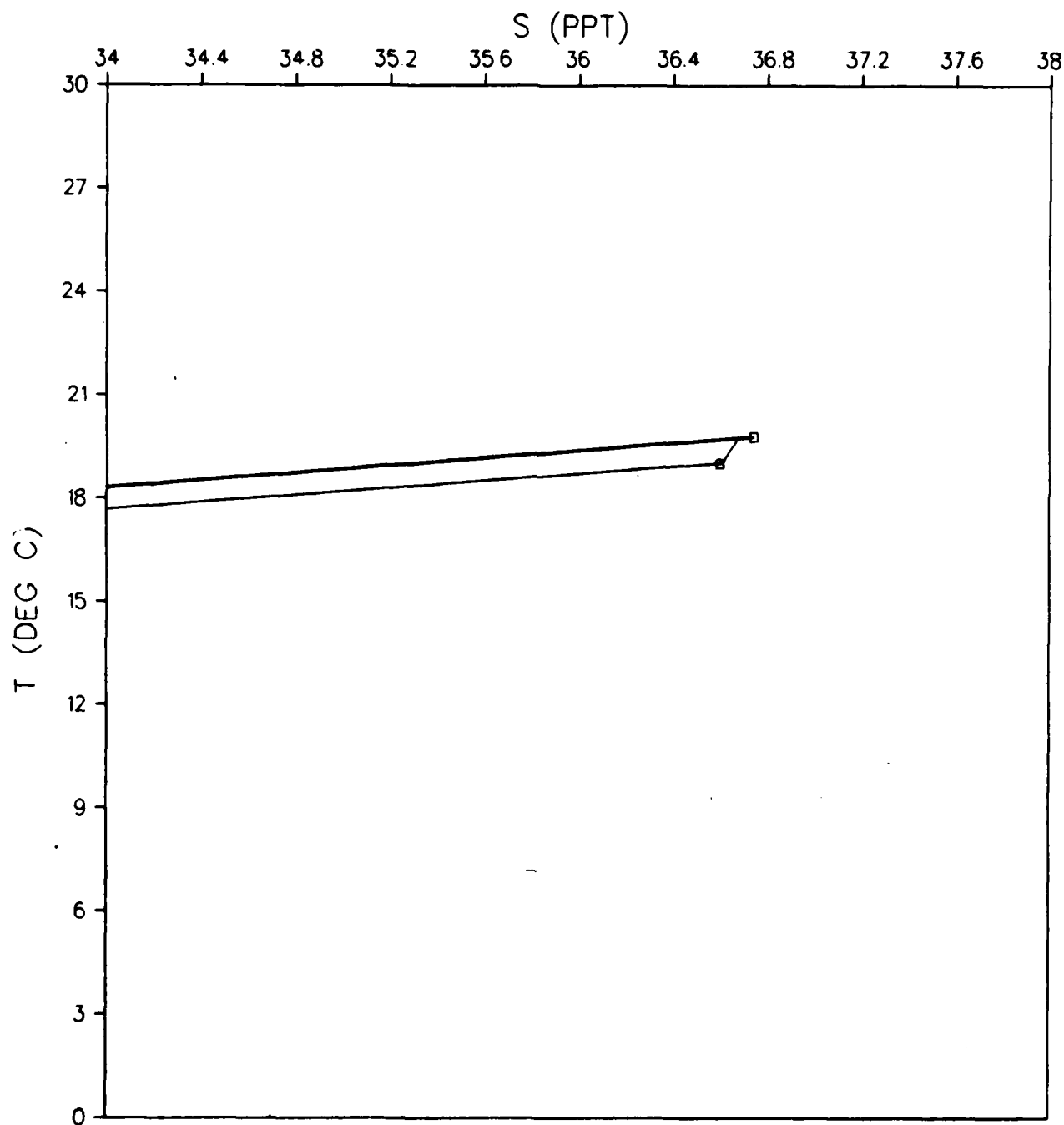


Figure 472.

ATOM 79 RECOVERY
STATION 200024

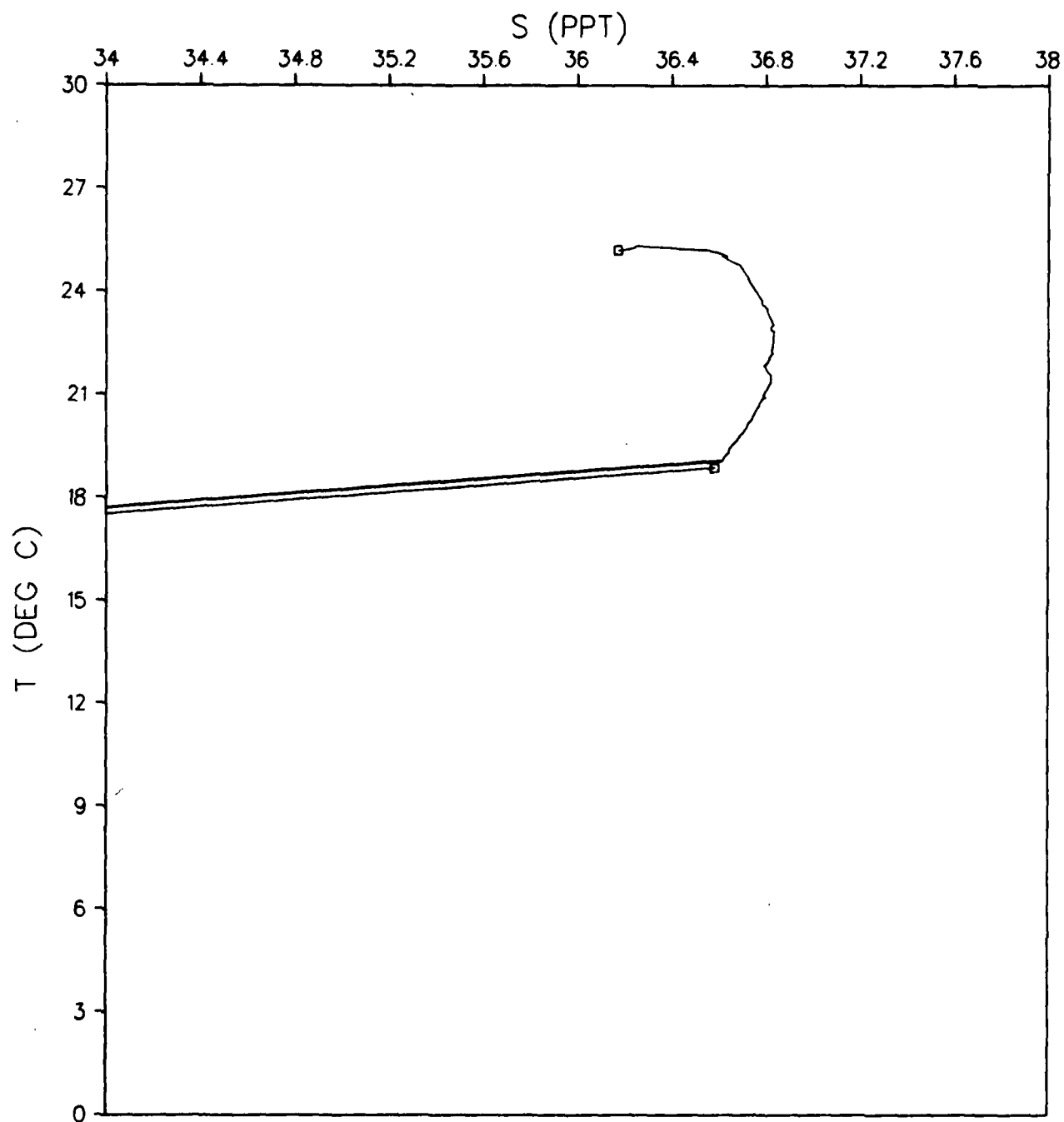


Figure 473.

ATOM 79 RECOVERY
STATION 200025

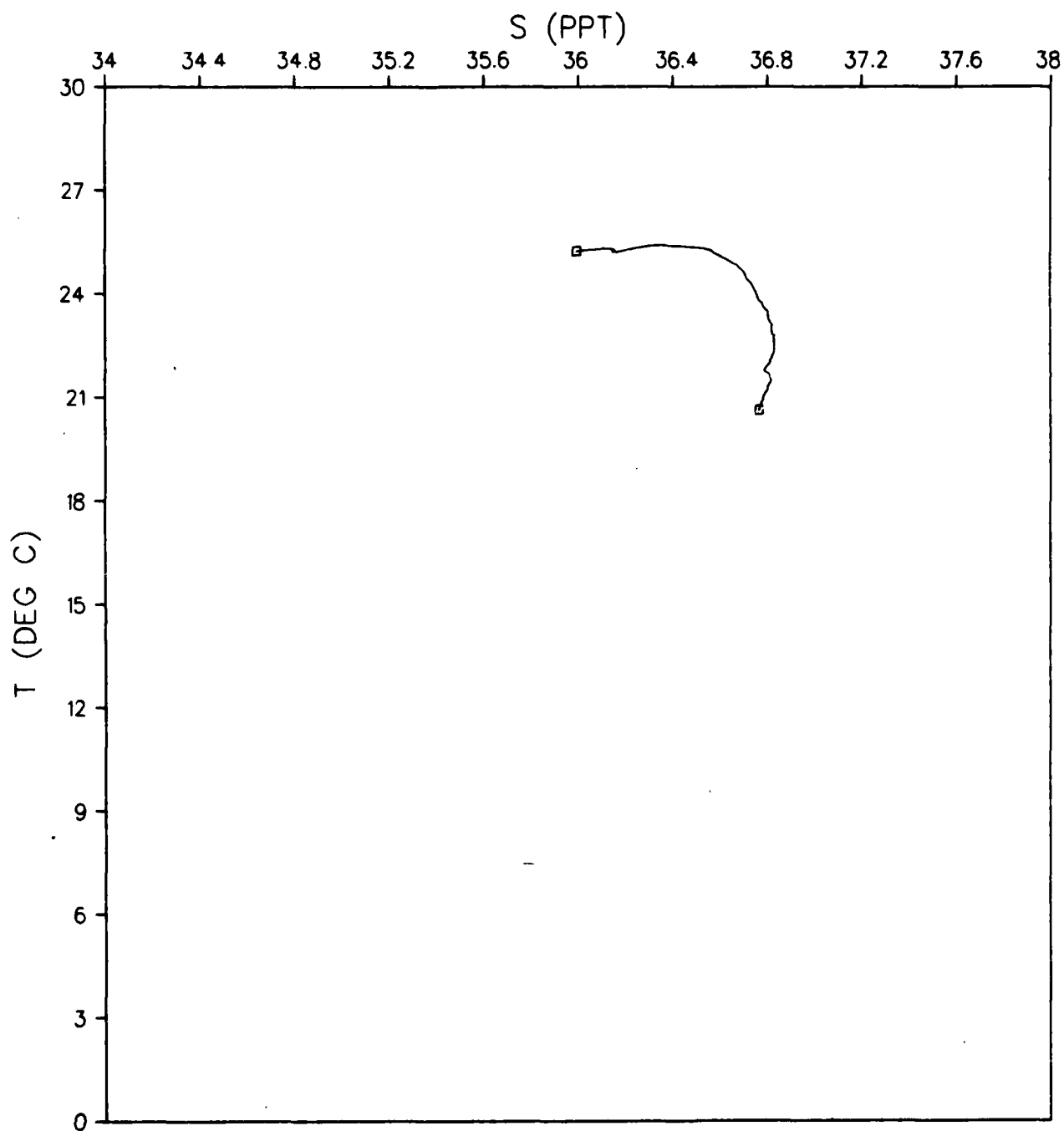


Figure 474.

ATOM 79 RECOVERY
STATION 200026

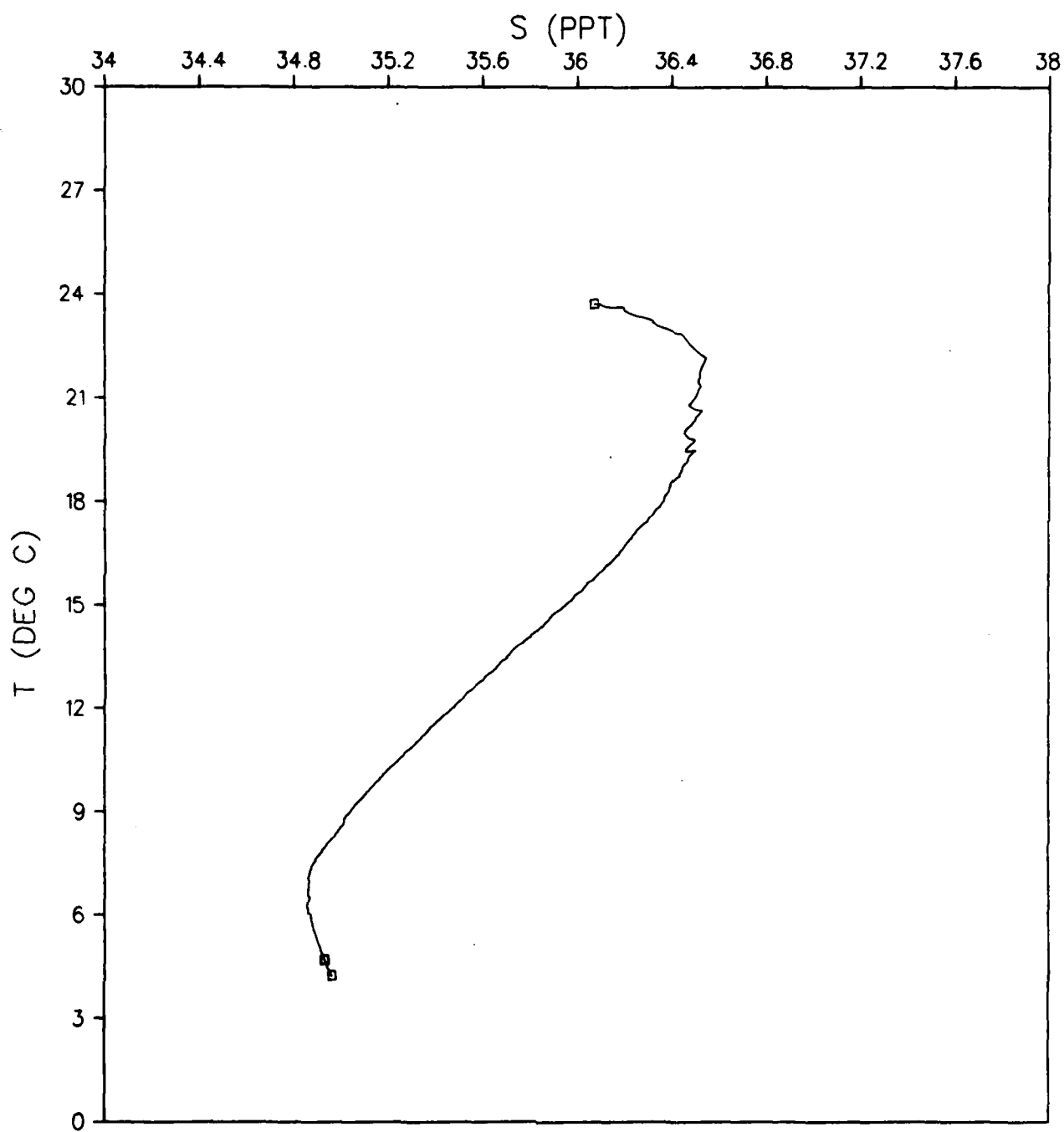


Figure 475.

ATOM 79 RECOVERY
STATION 200027

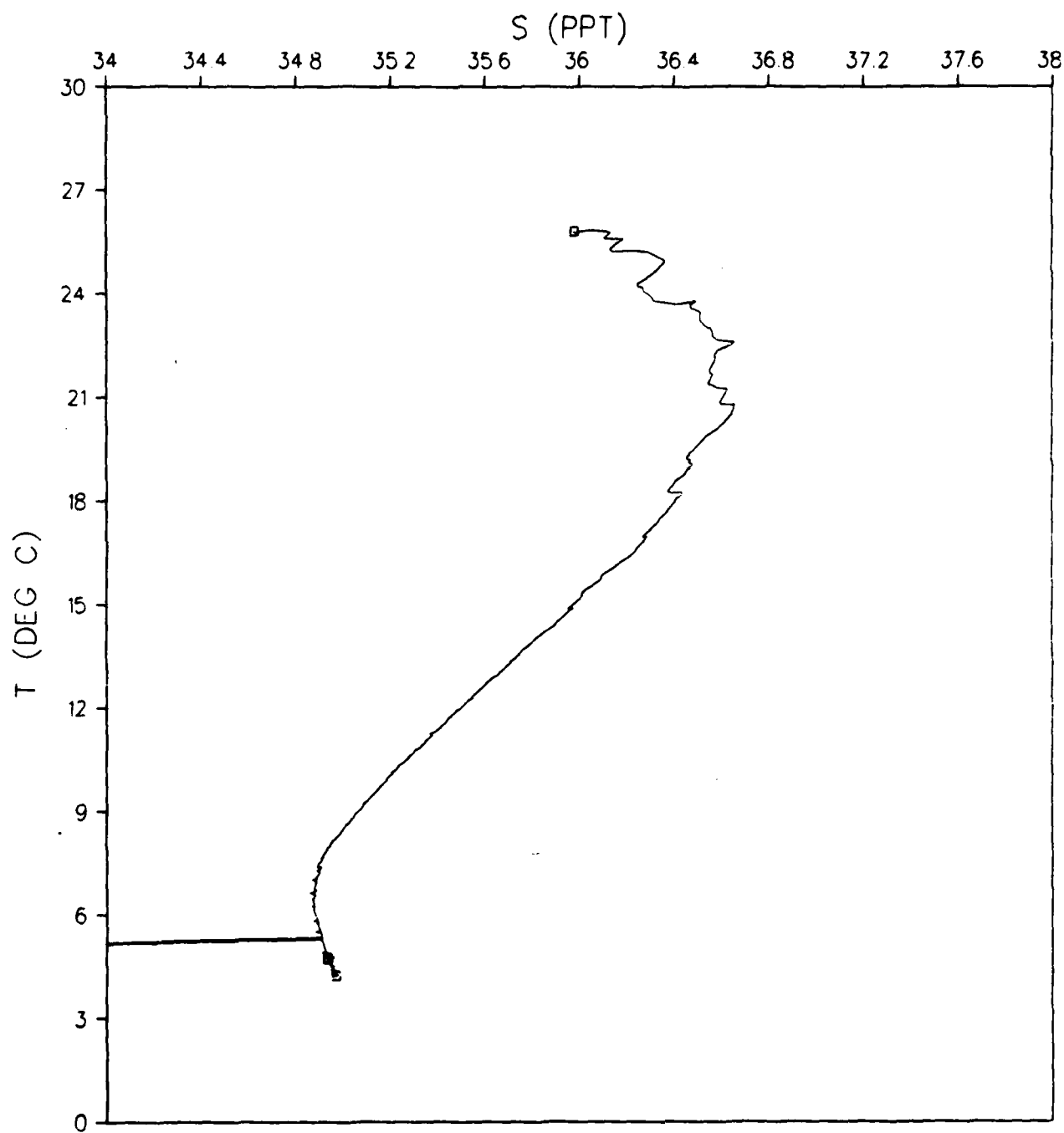


Figure 476.

ATOM 79 RECOVERY
STATION 200028

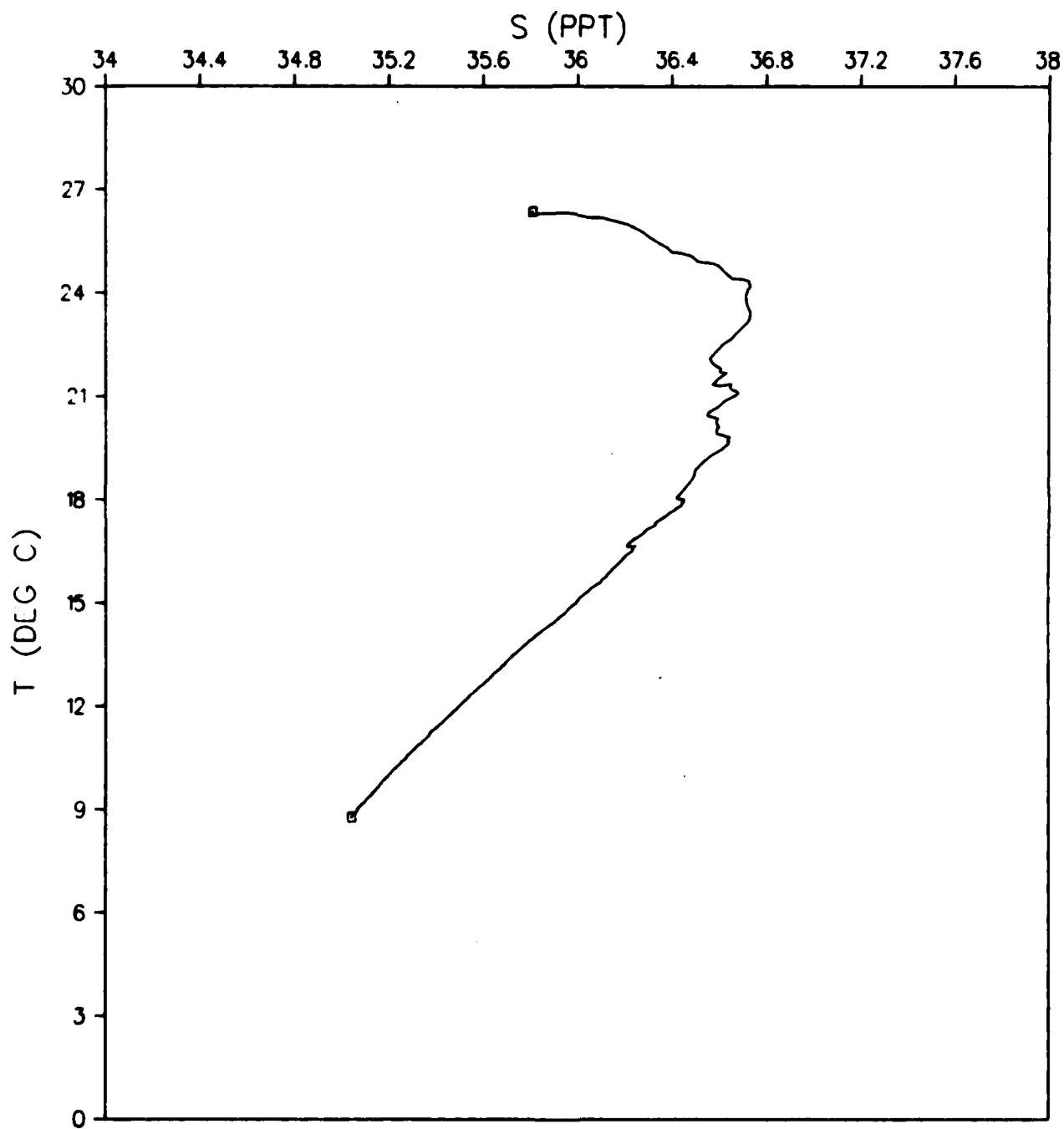


Figure 477.

ATOM 79 RECOVERY
STATION 200029

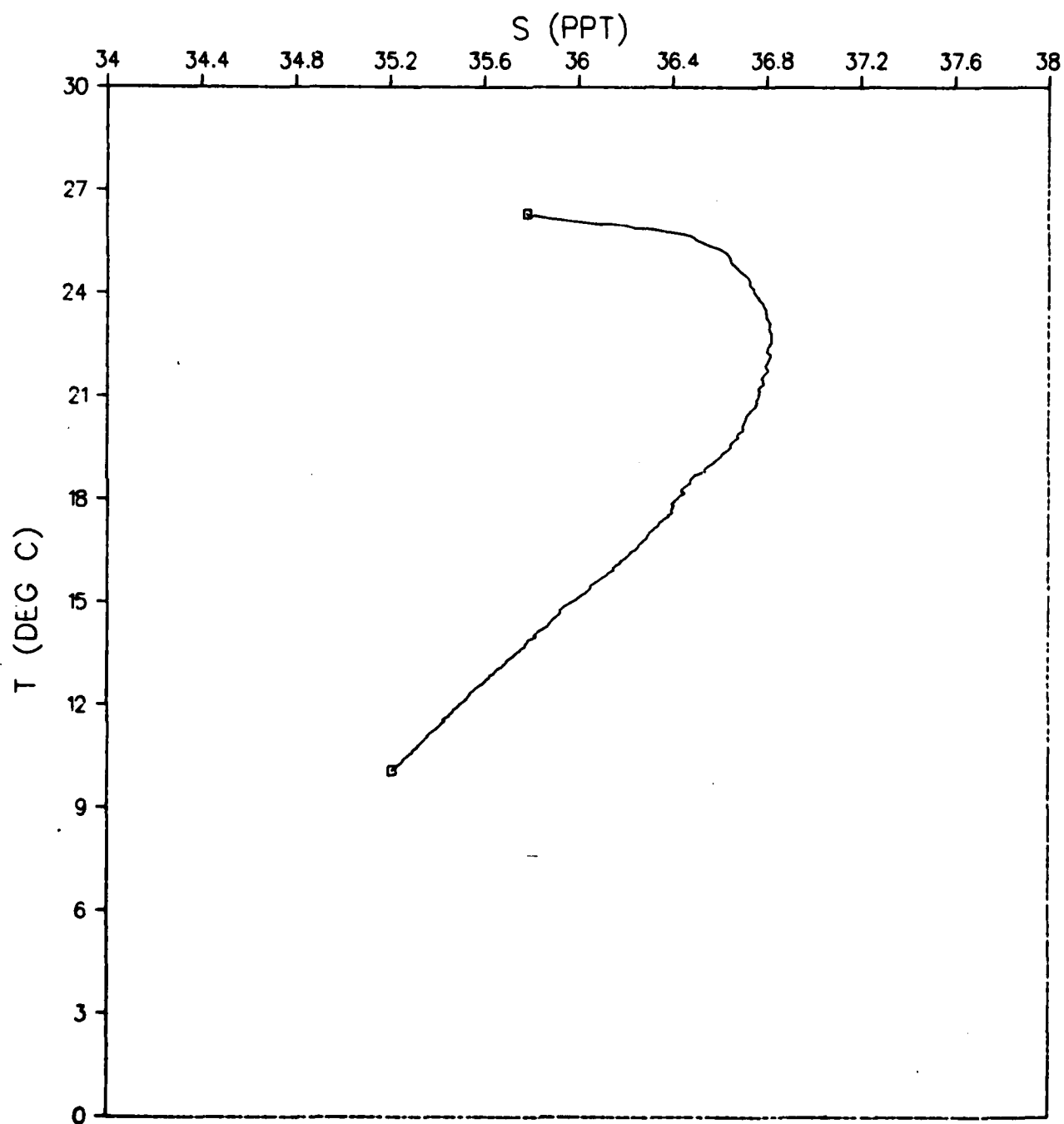


Figure 478.

ATOM 79 RECOVERY
STATION 200030

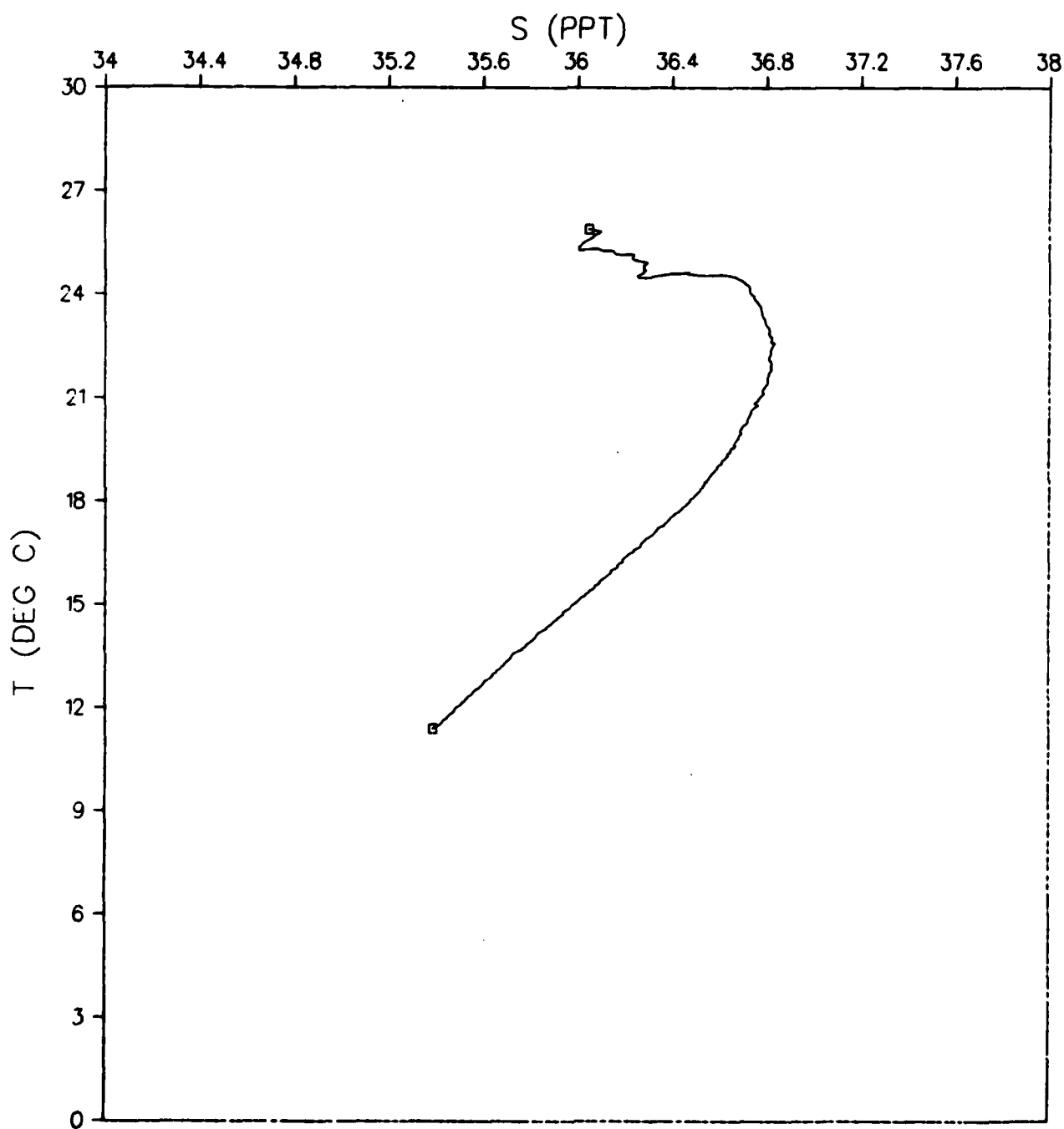


Figure 479.

ATOM 79 RECOVERY
STATION 200031

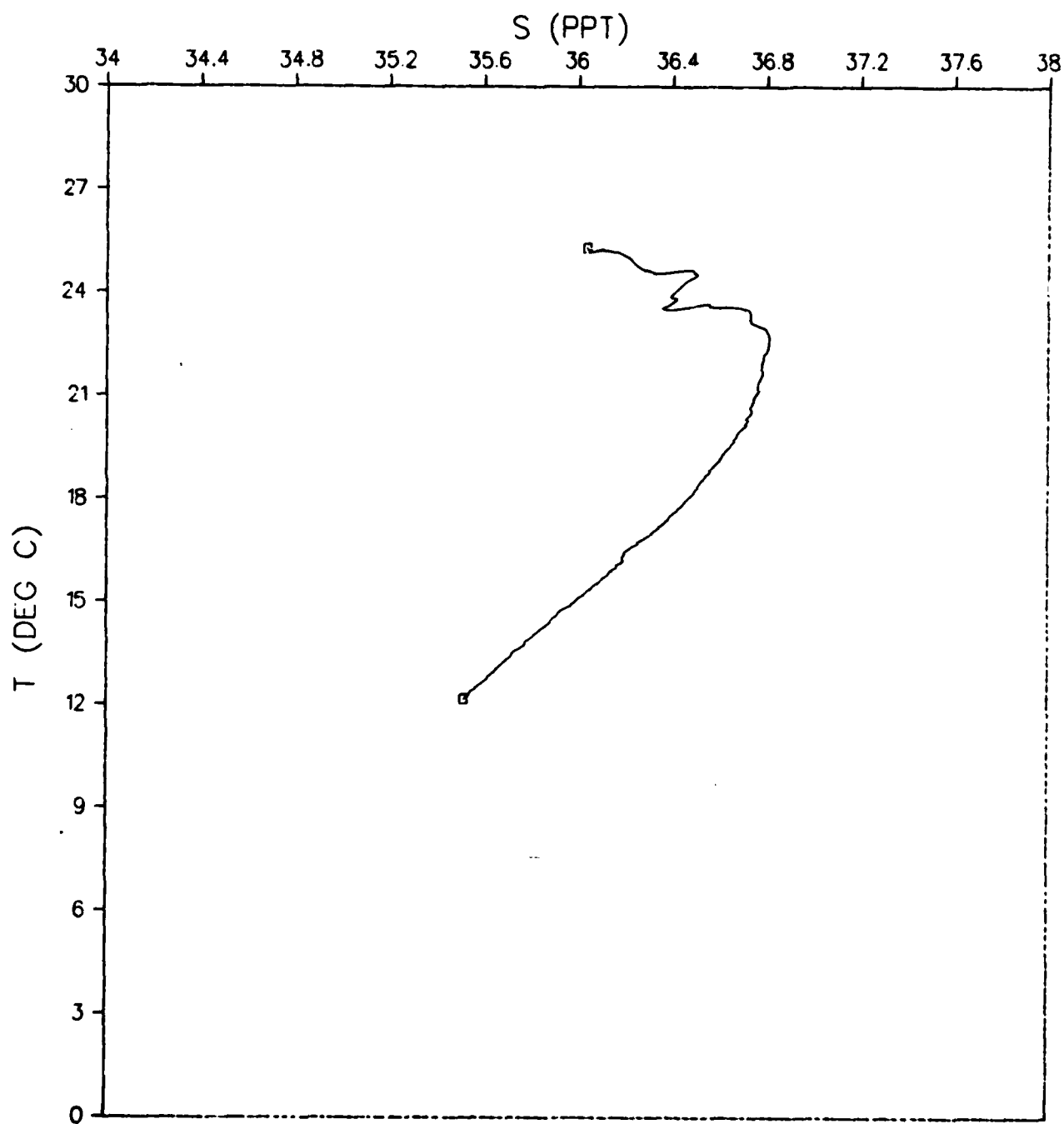


Figure 480.

ATOM 79 RECOVERY
STATION 200032

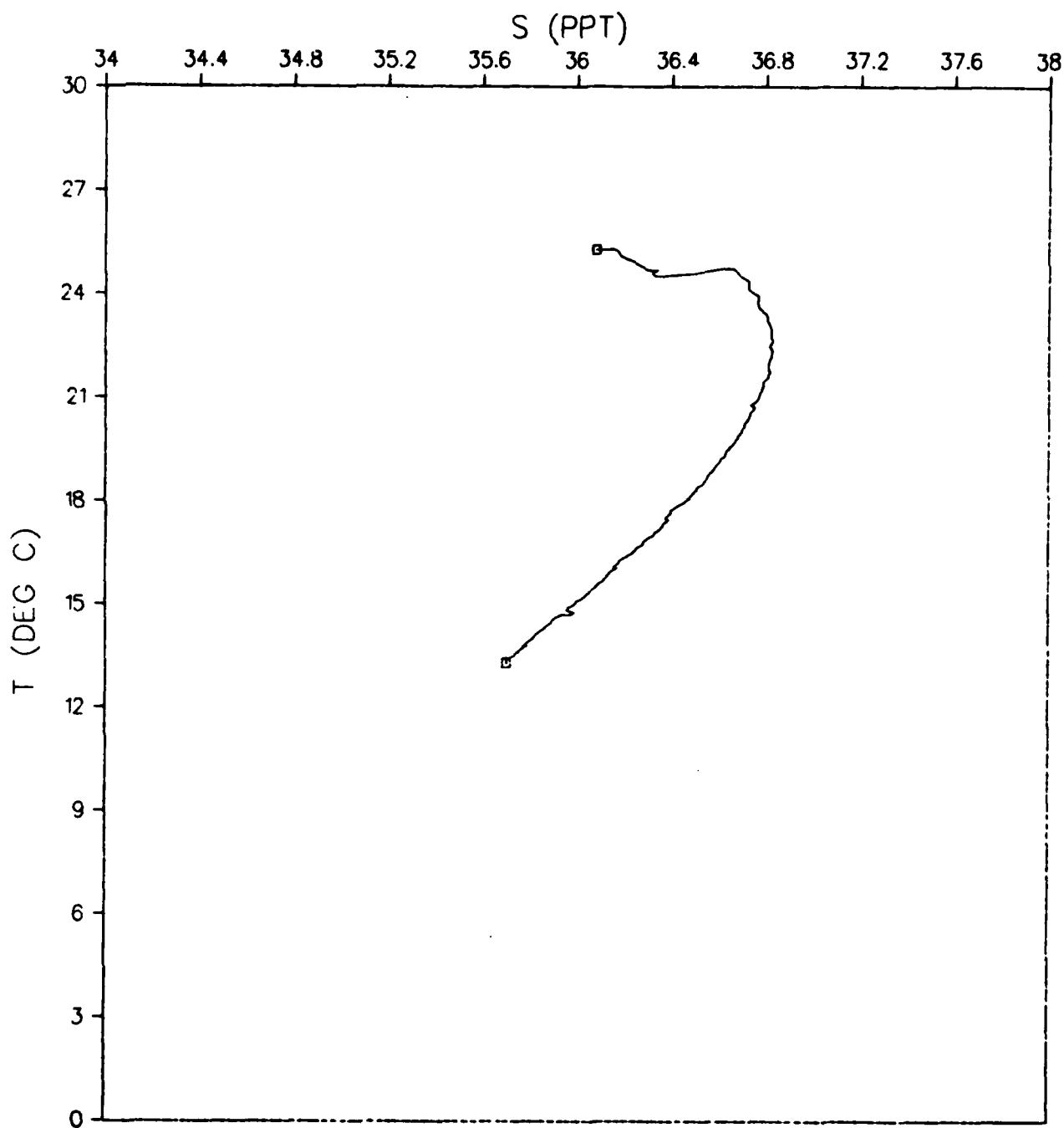


Figure 481.

ATOM 79 RECOVERY
STATION 200033

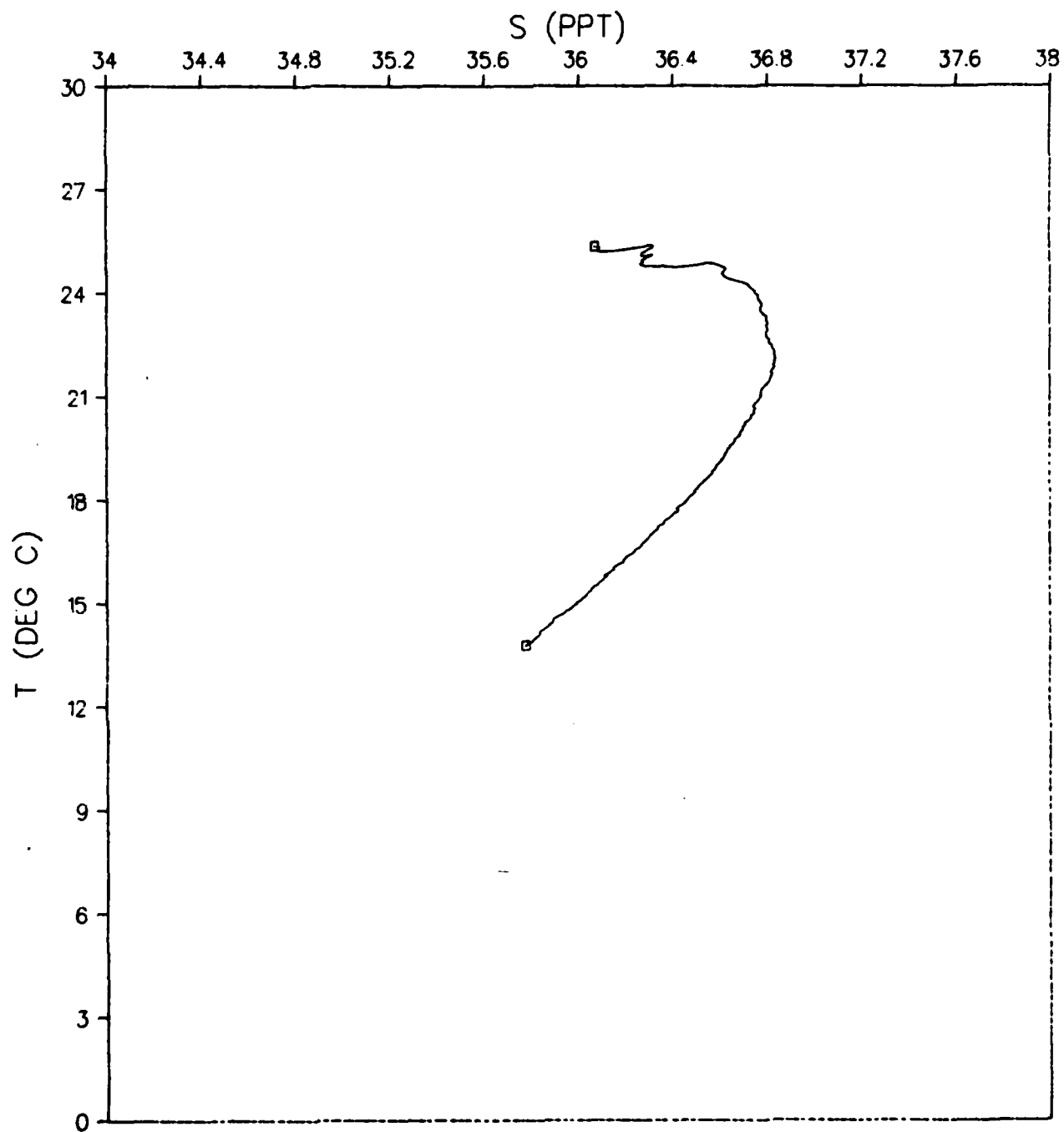


Figure 482.

ATOM 79 RECOVERY
STATION 200034

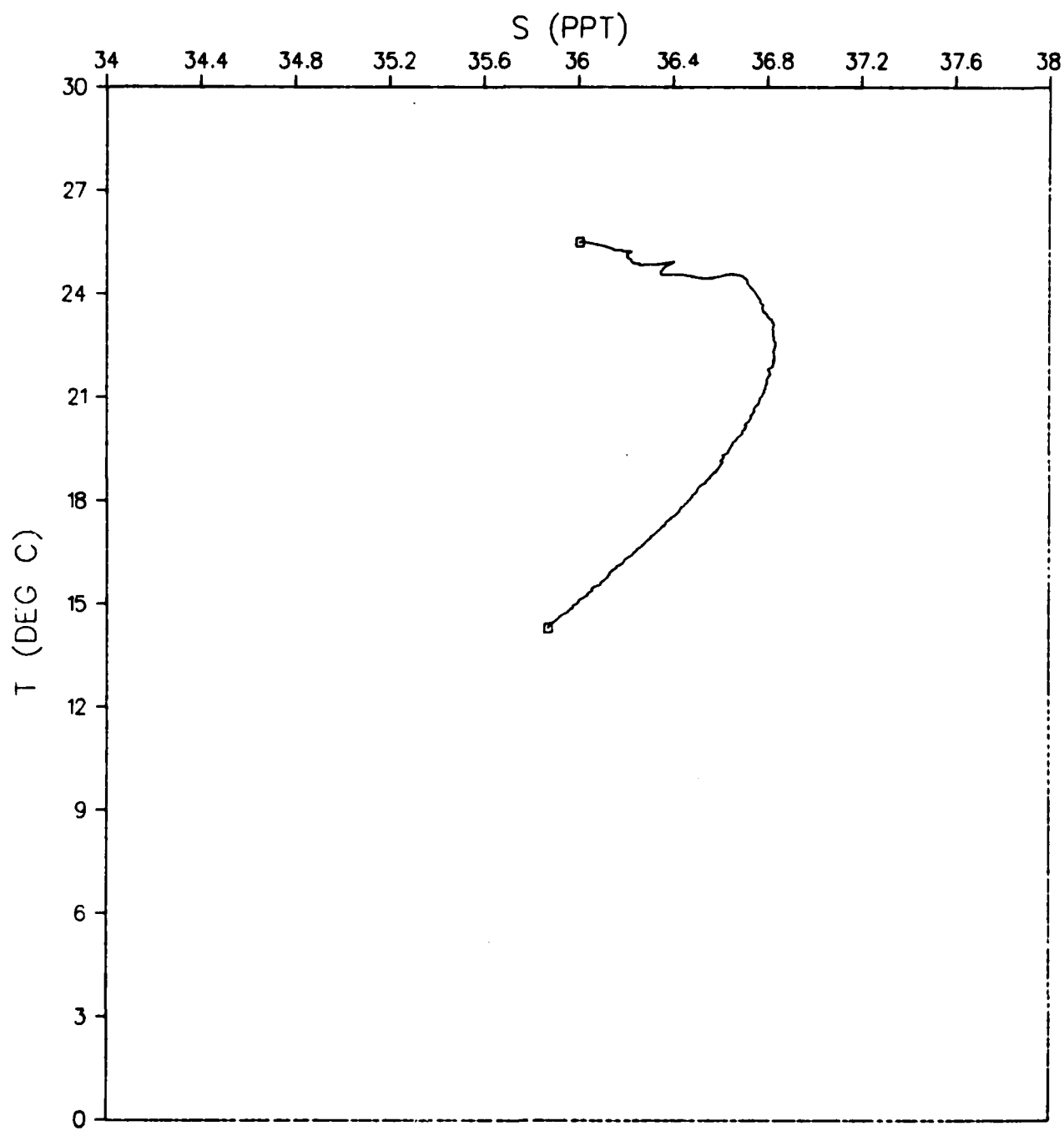


Figure 483.

ATOM 79 RECOVERY
STATION 200035

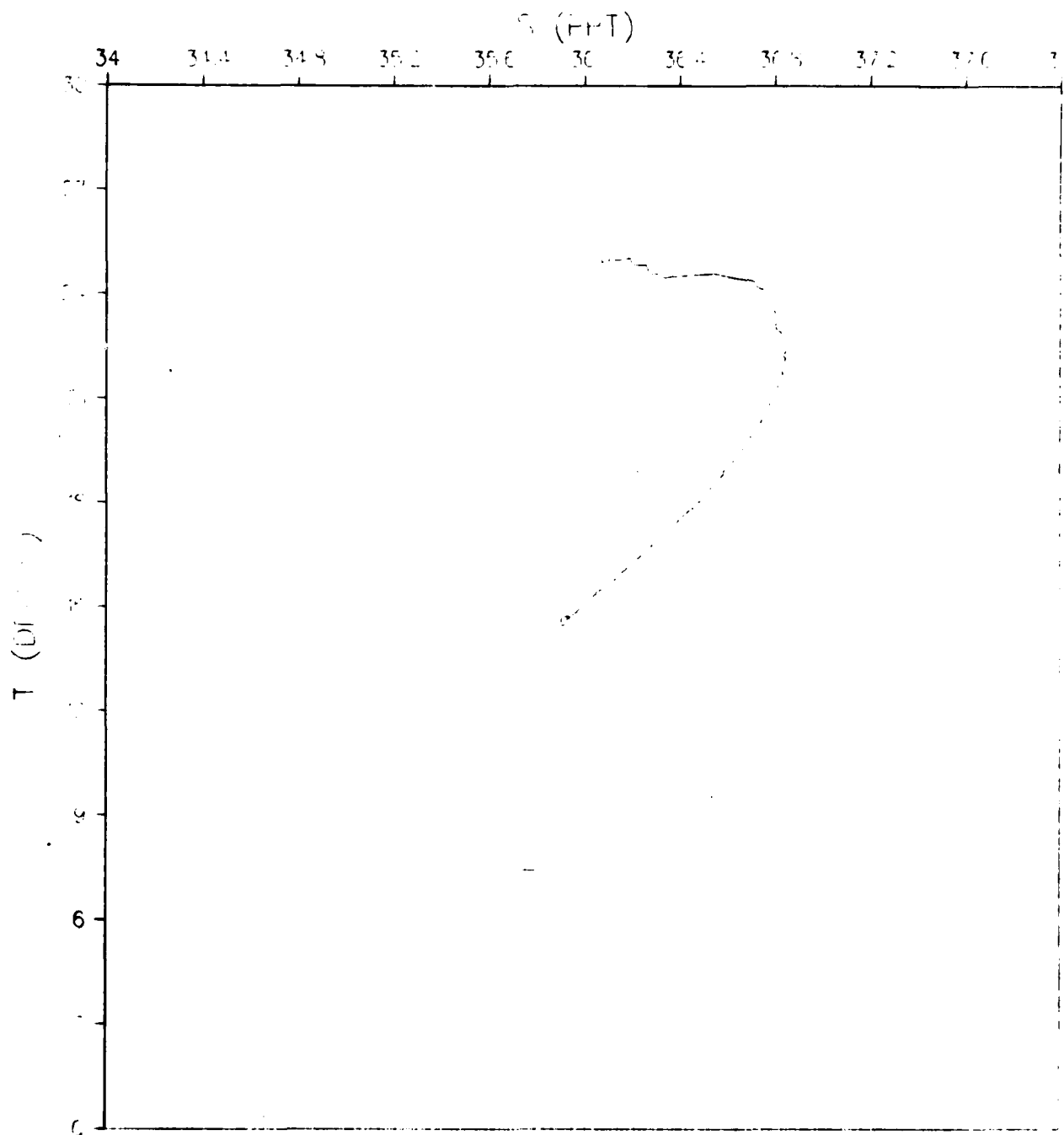


Figure 484.

ATOM 79 RECOVERY
STATION 200036

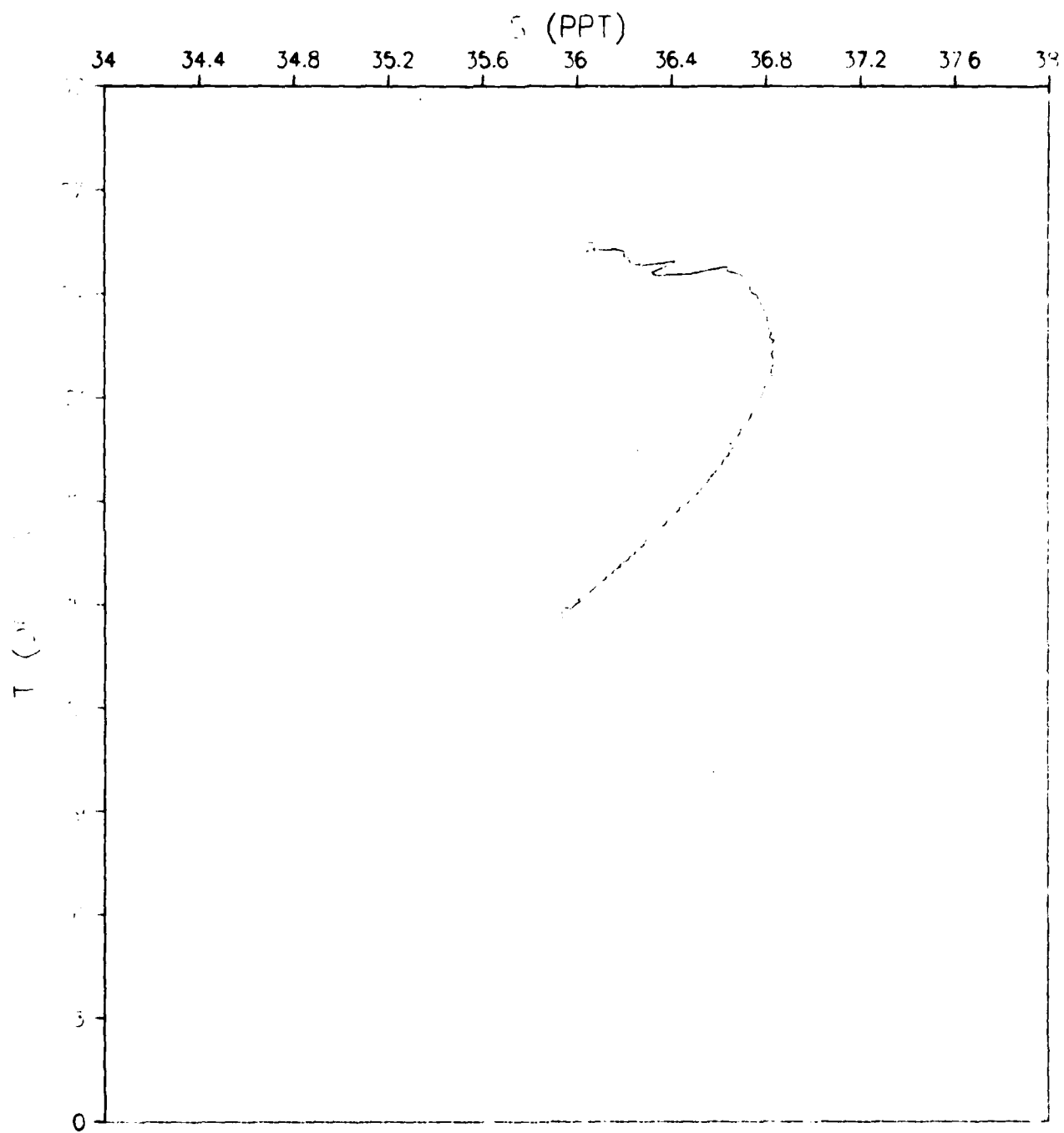


Figure 485.

ATOM 79 RECOVERY
STATION 200037

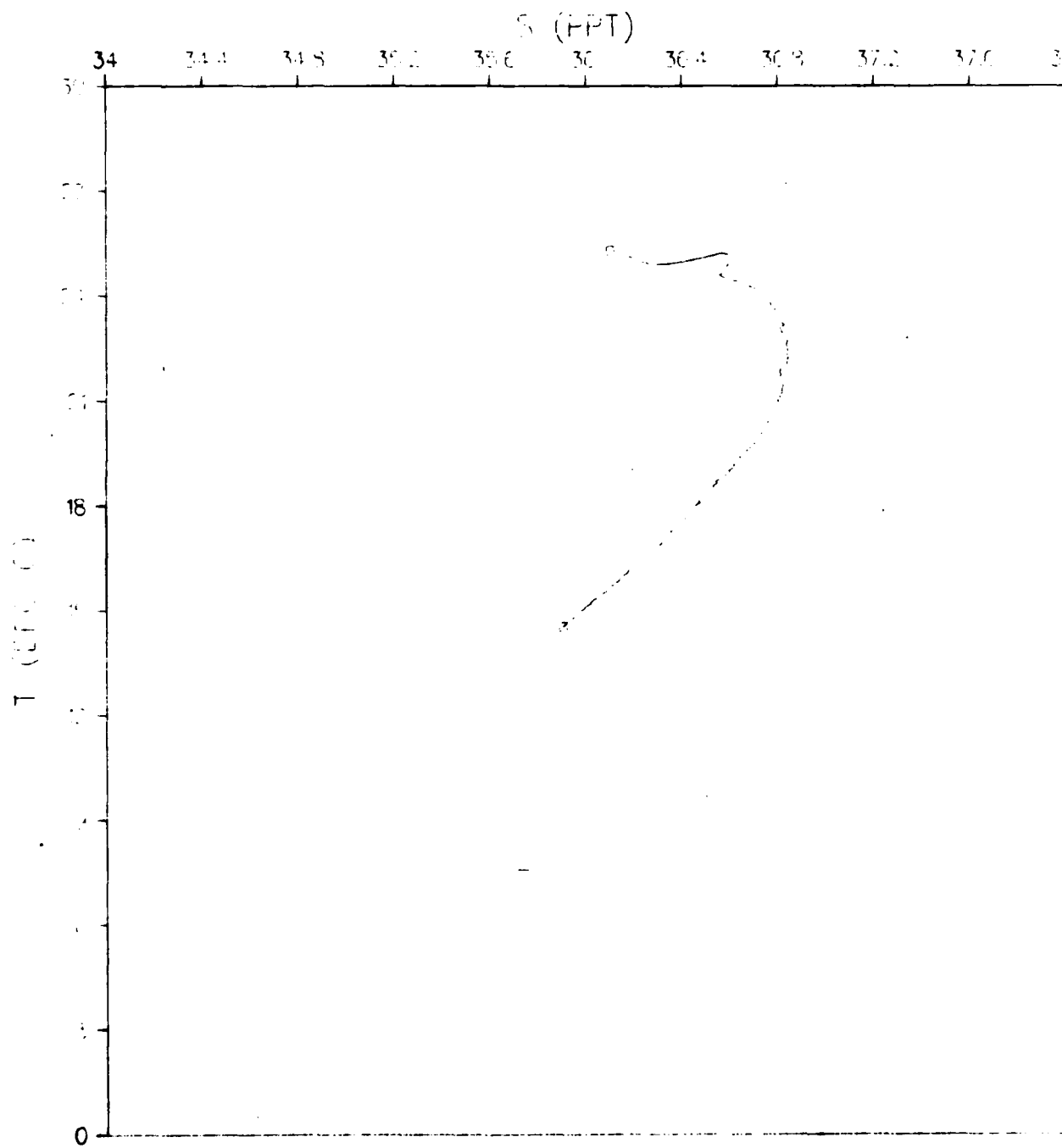


Figure 486.

ATOM 79 RECOVERY
STATION 200038

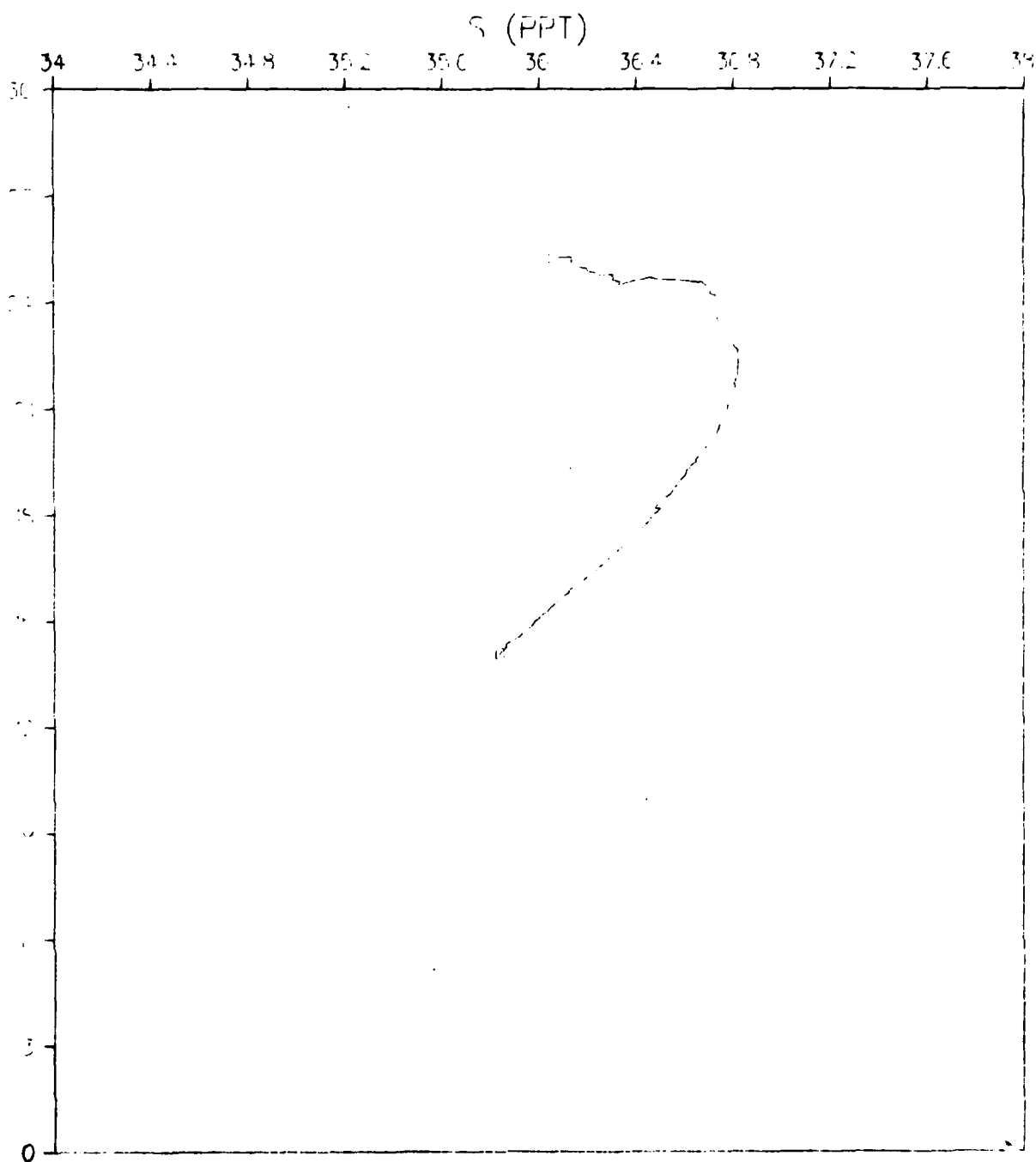


Figure 487.

ATOM 79 RECOVERY
STATION 200039

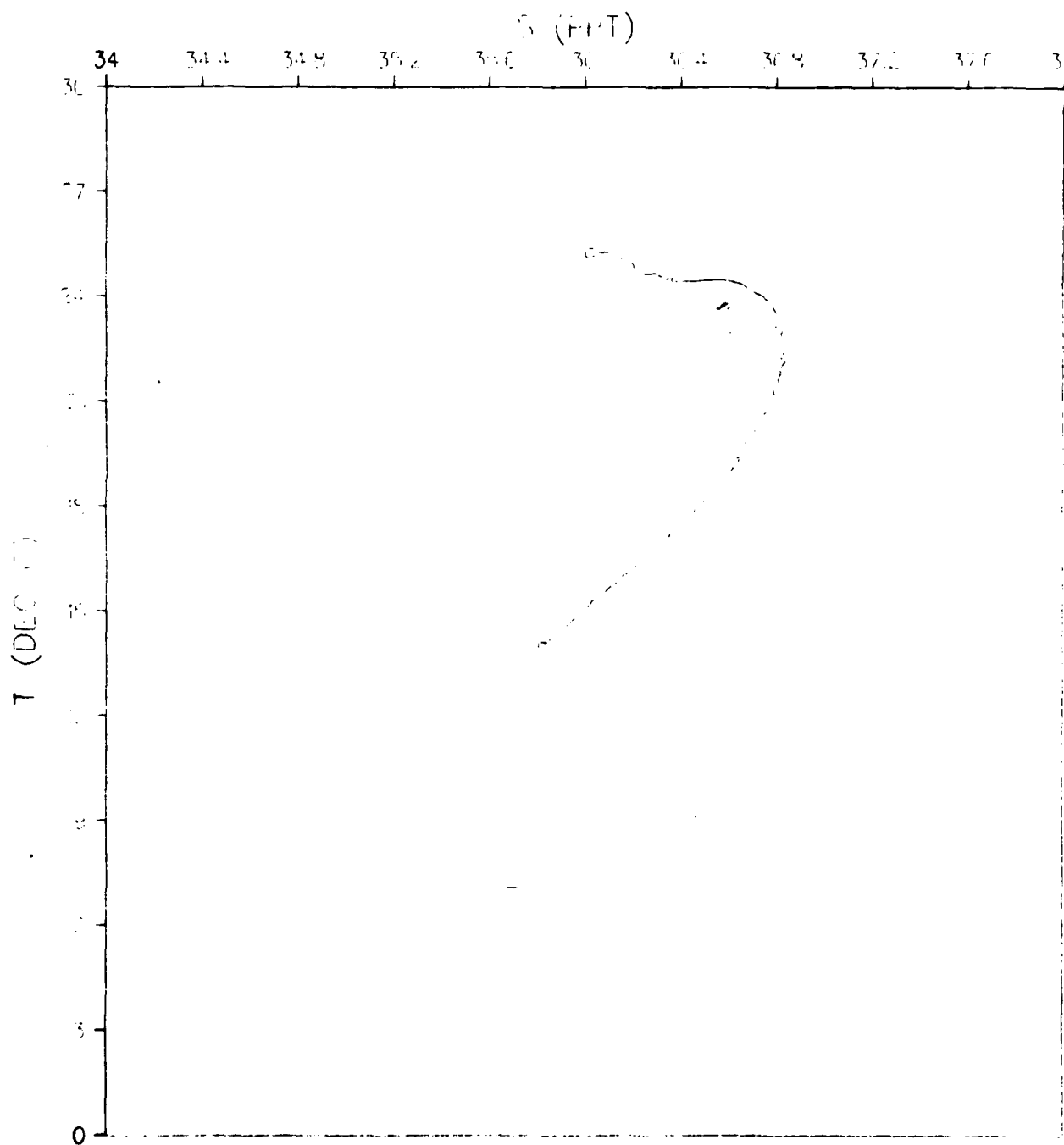


Figure 488.

ATOM 79 RECOVERY
STATION 200040

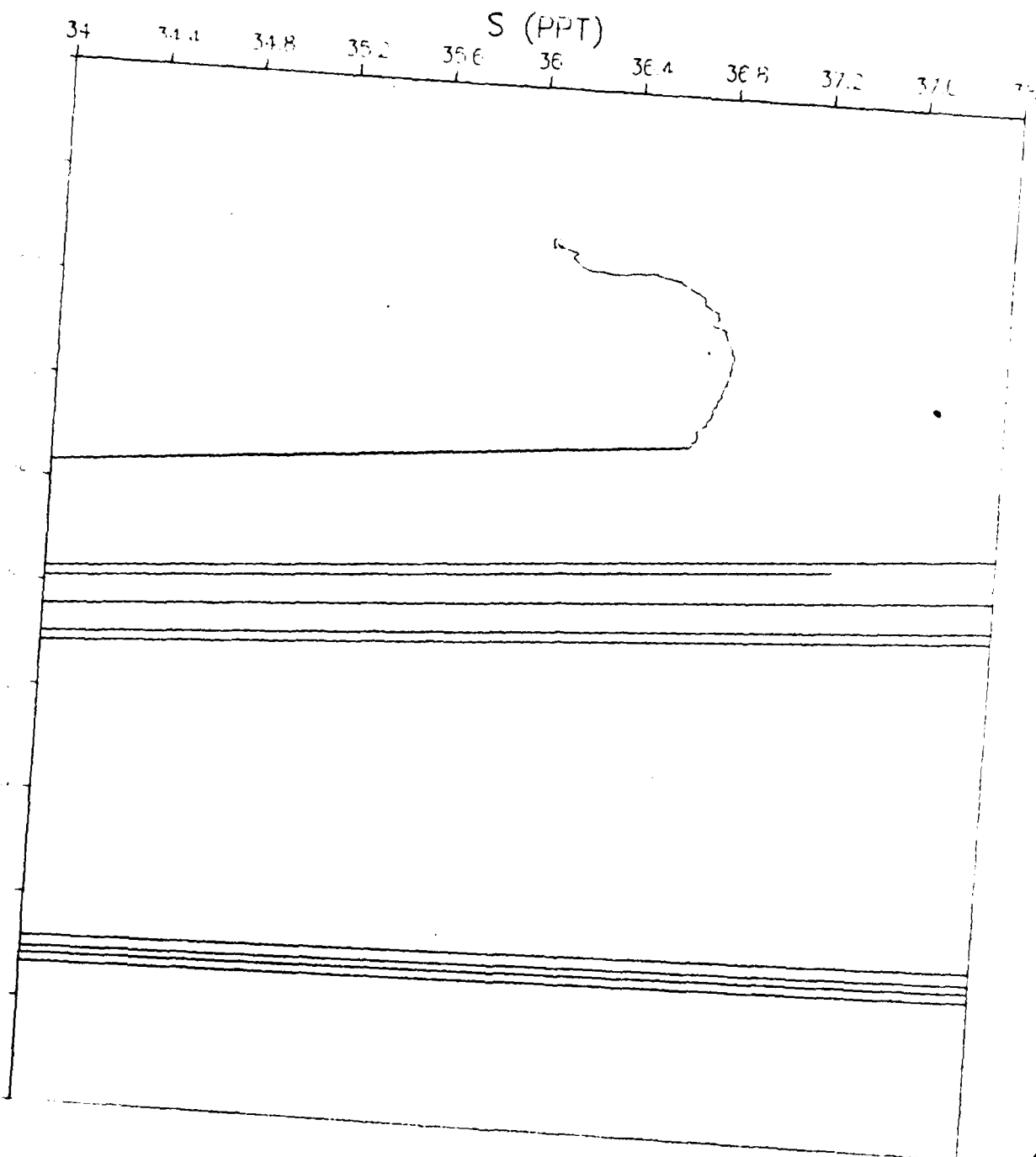


Figure 489,

ATOM 79 RECOVERY
STATION 200041

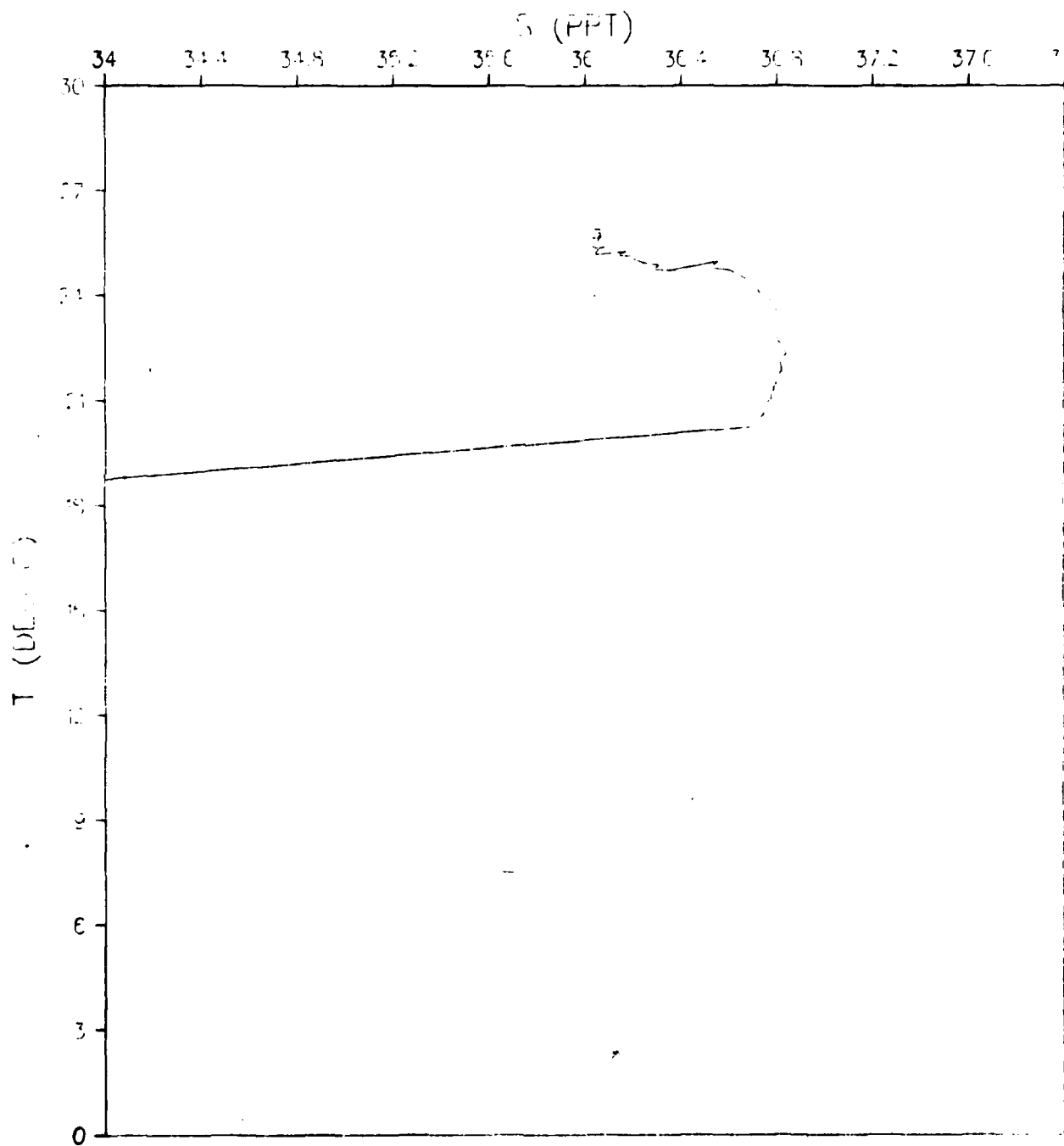


Figure 490.

5.0 METEROLOGICAL DATA

- 5.1 Plots of Temperature (Air and Sea), Barometric Pressure, Wind Speed, Wind Direction, Wave Height and Direction at the NOAA Data Buoys (Figures 491-500)

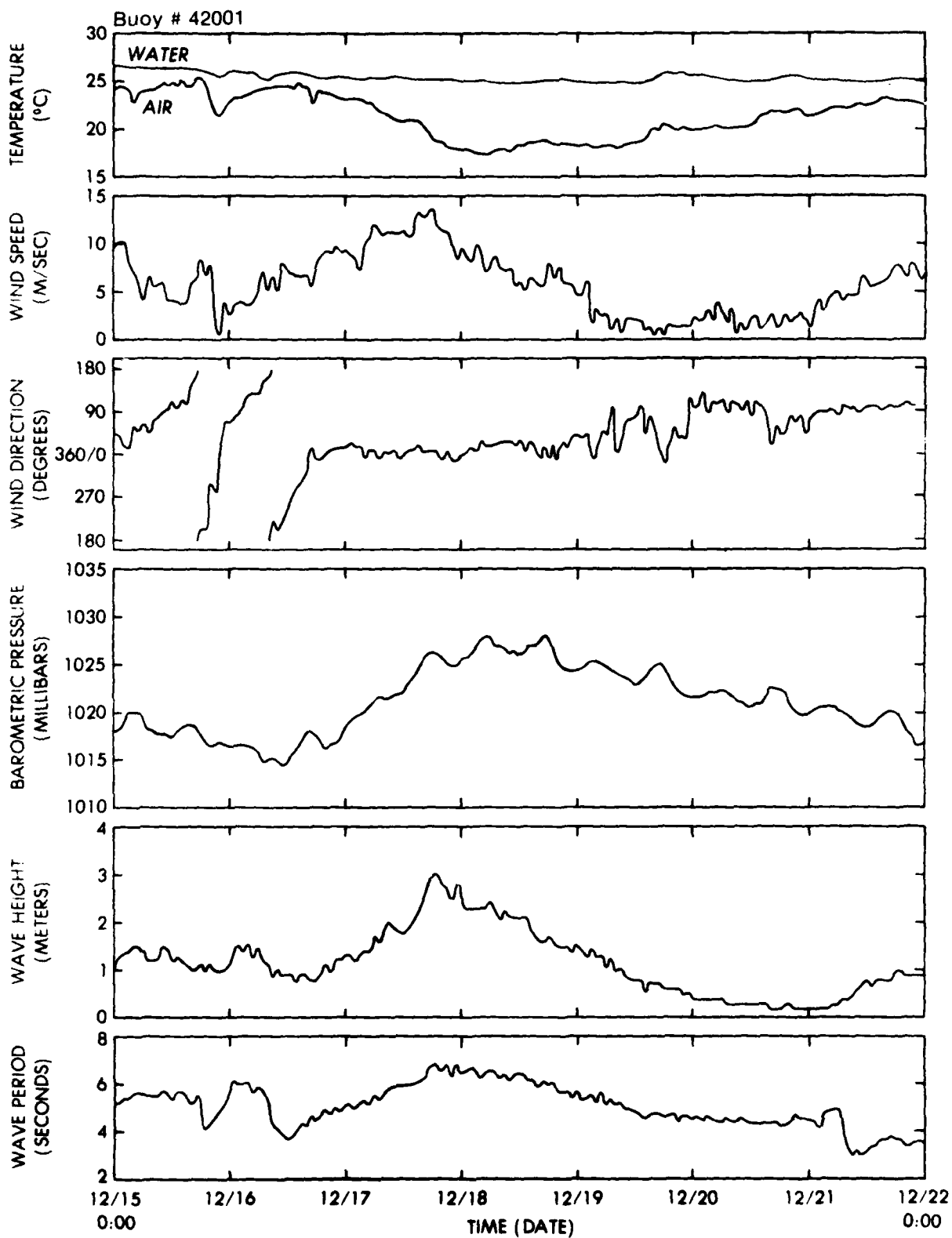


Figure 491.

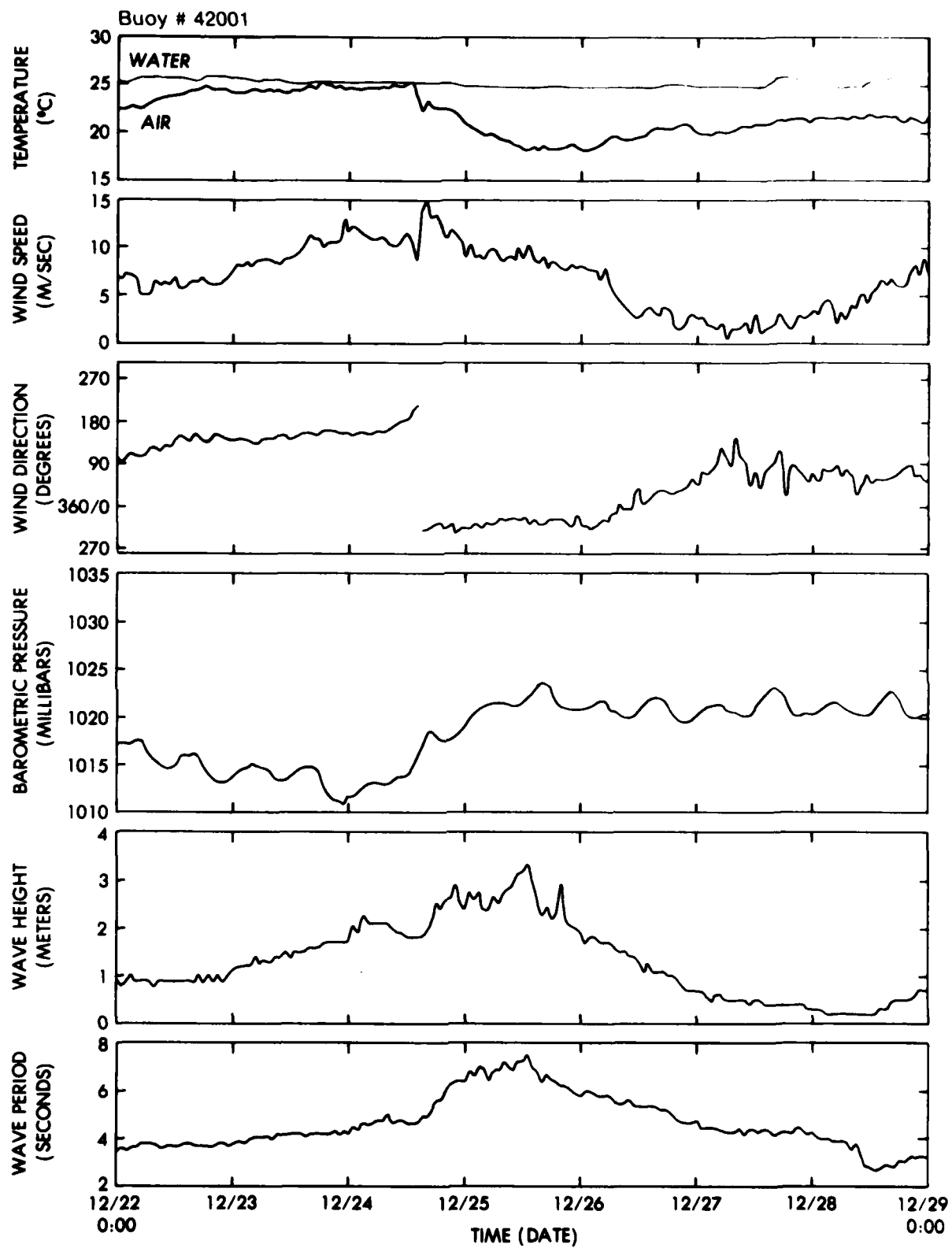


Figure 492.

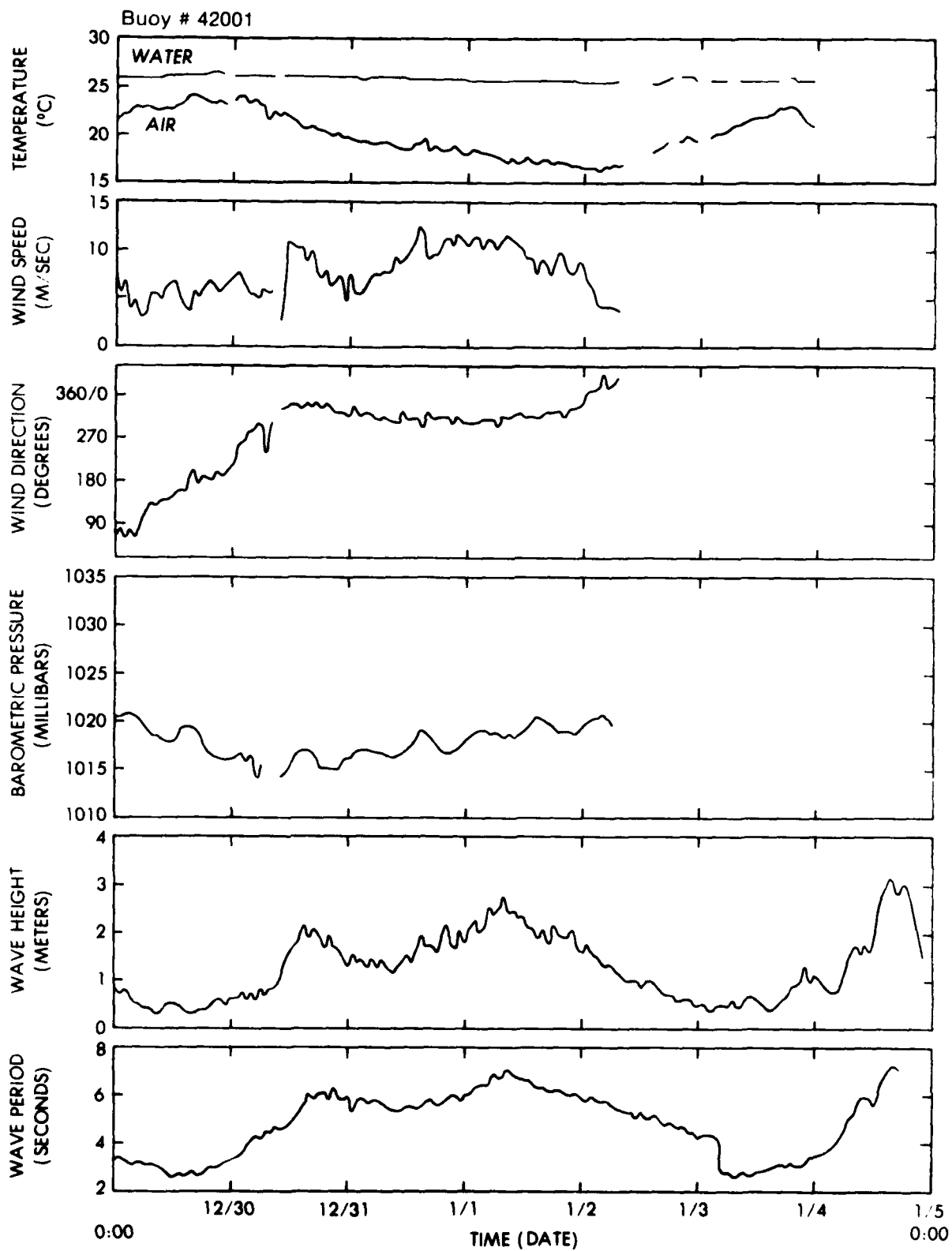


Figure 493.

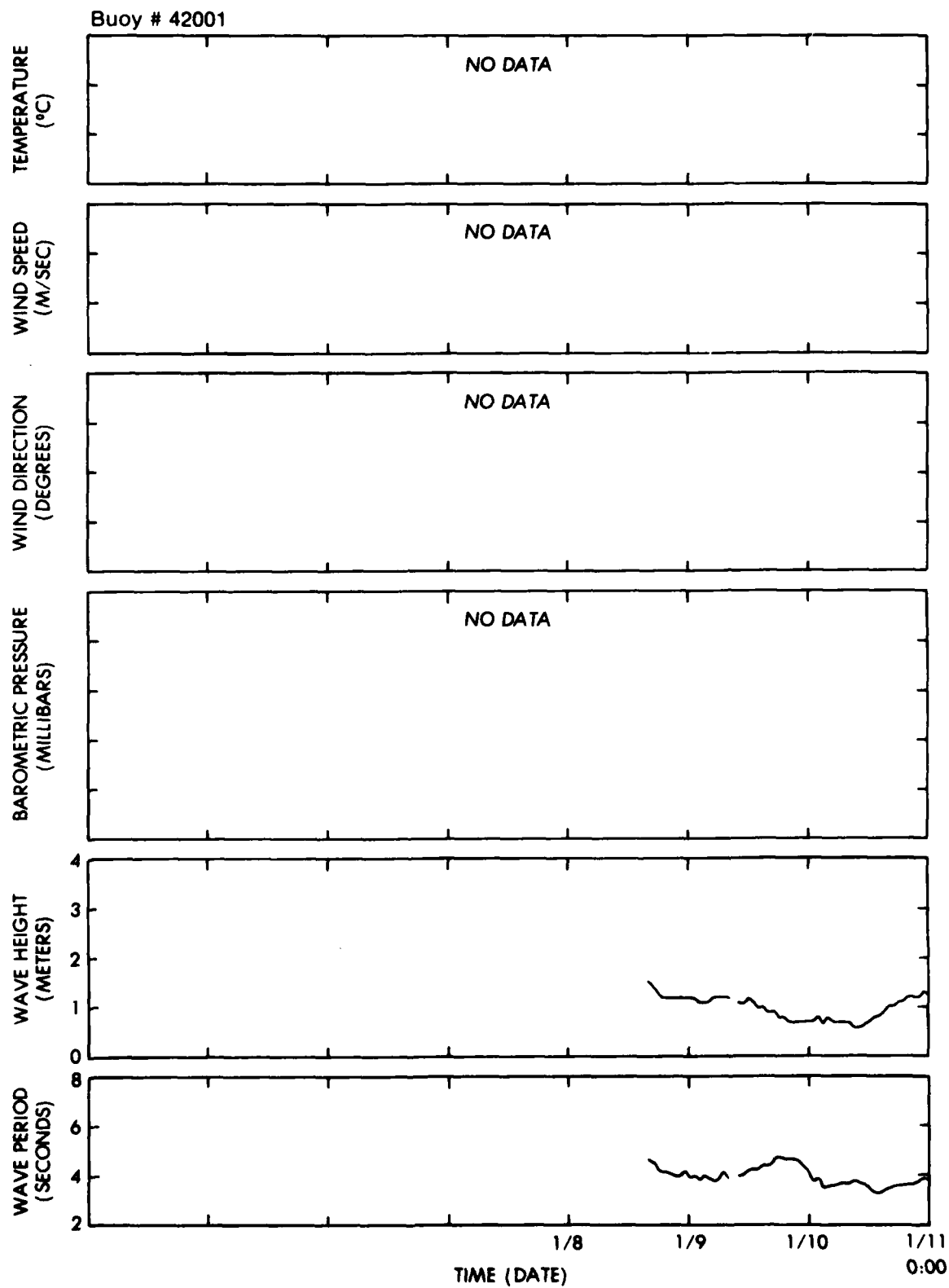


Figure 494.

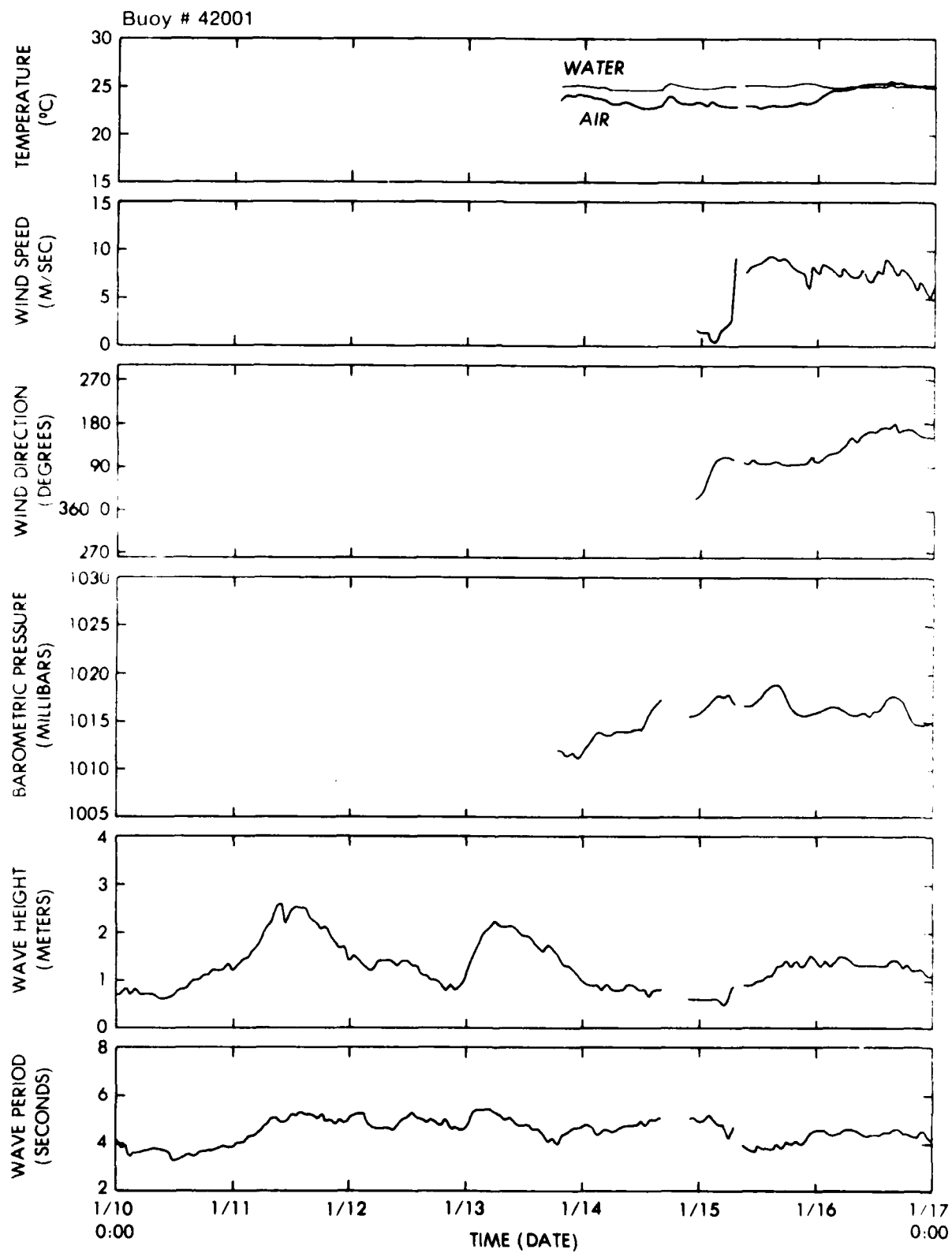


Figure 495.

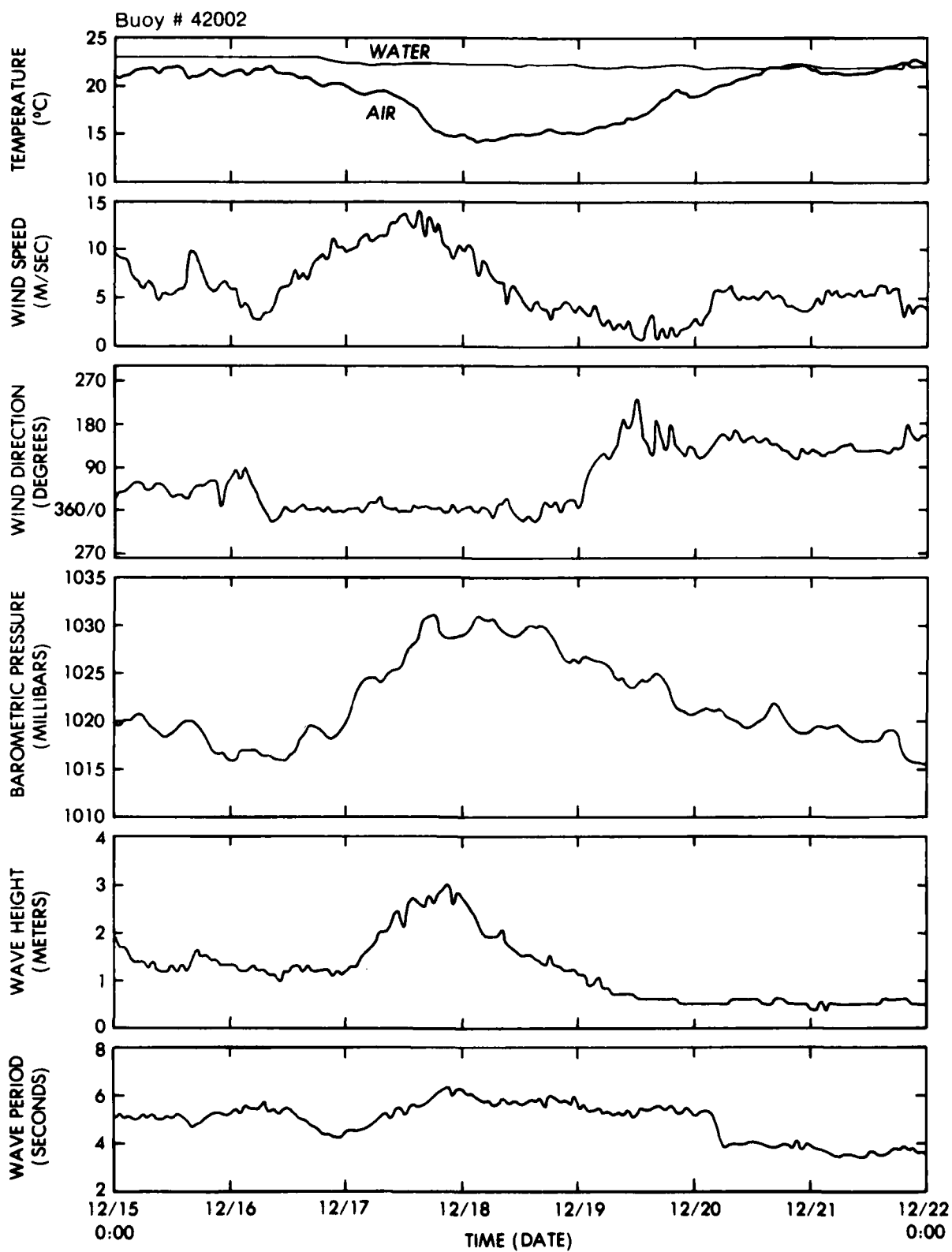


Figure 496.

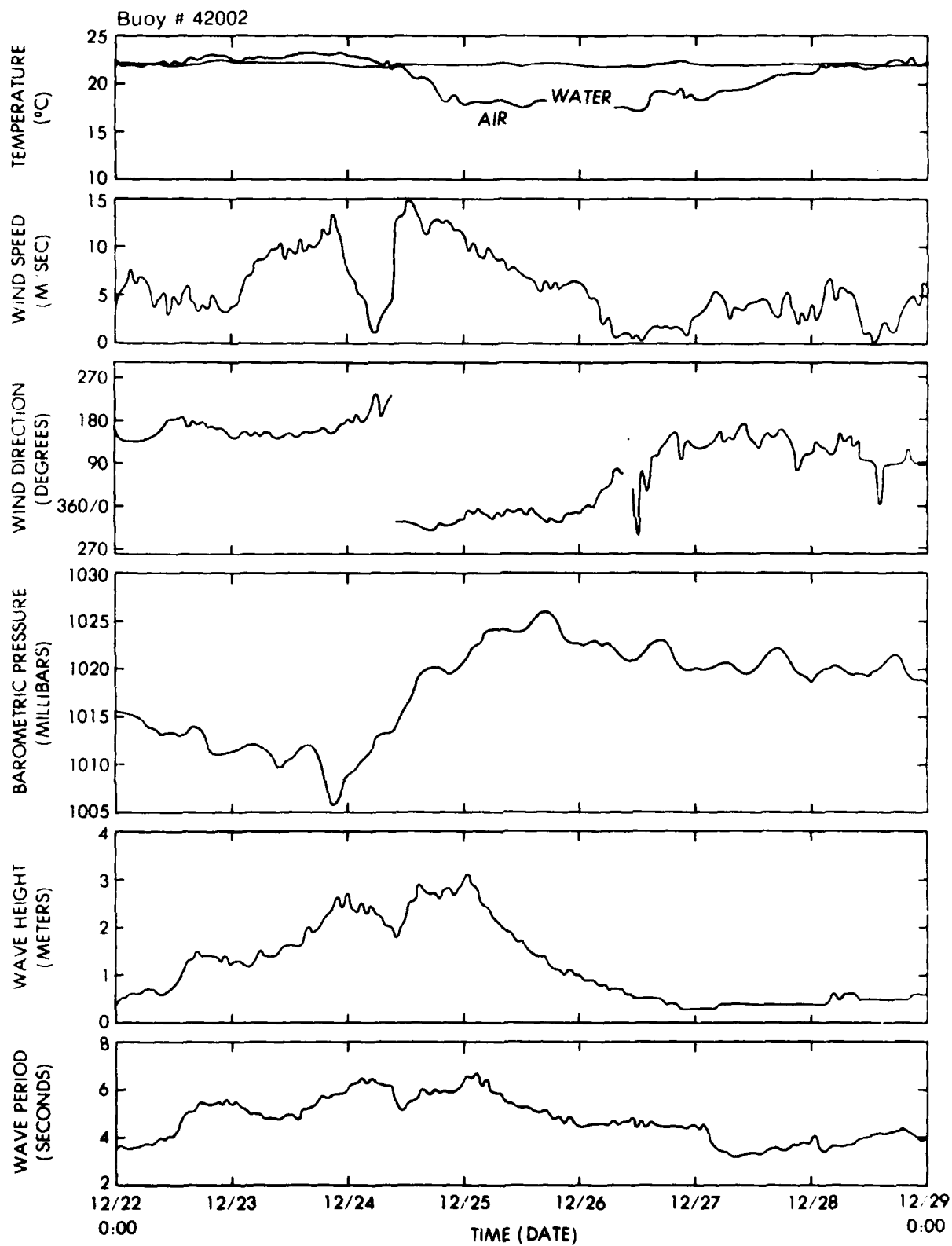


Figure 497.

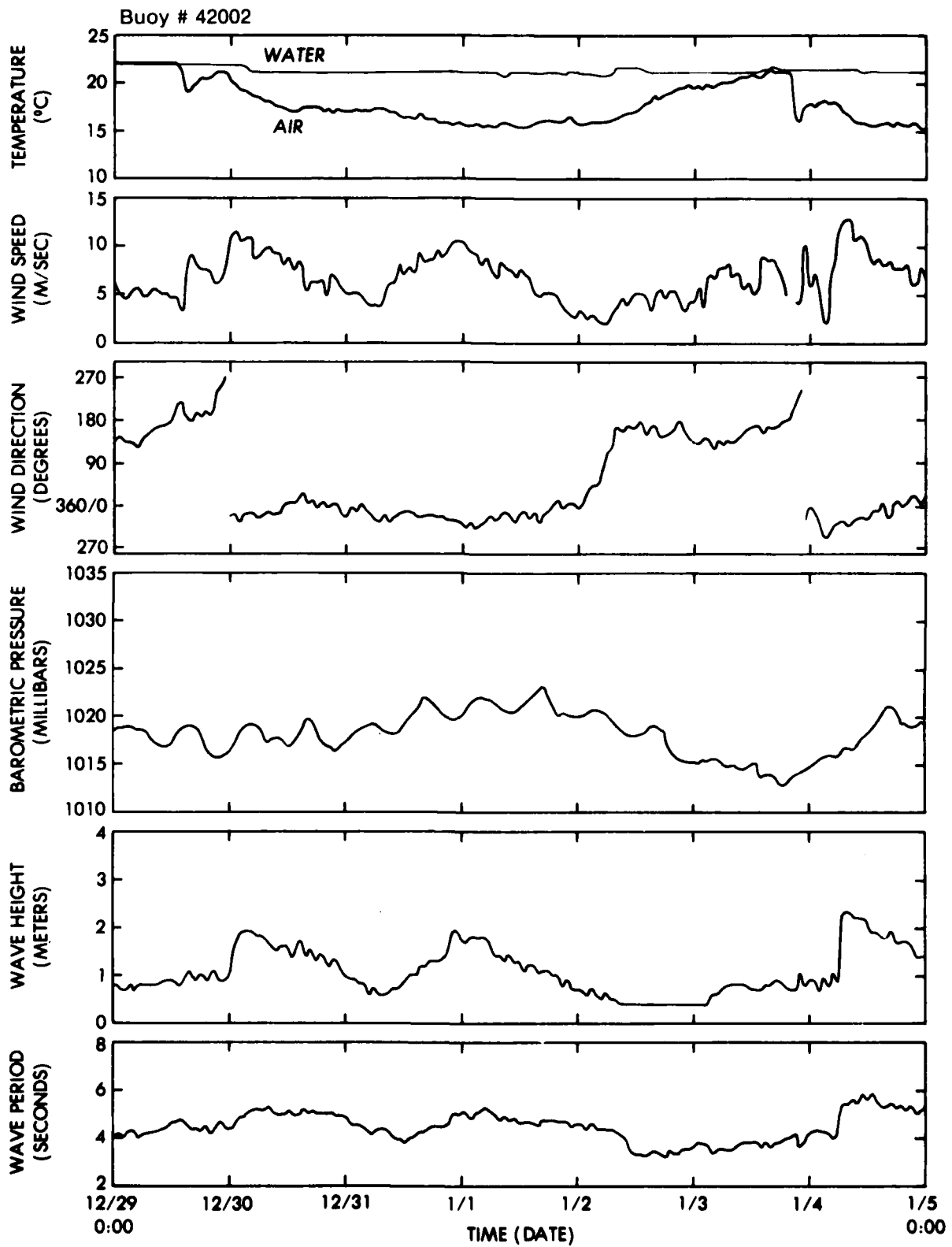


Figure 498.

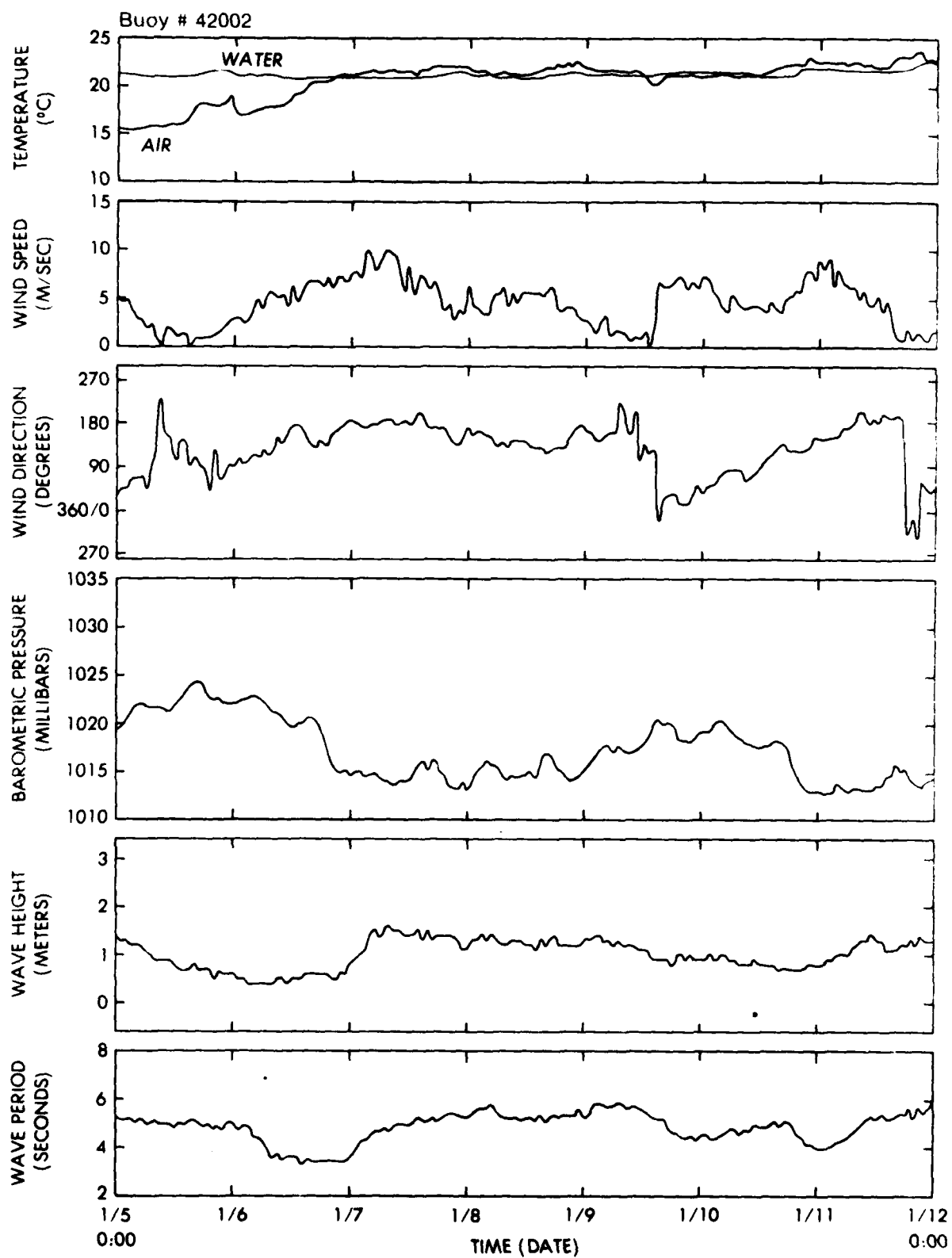


Figure 499.

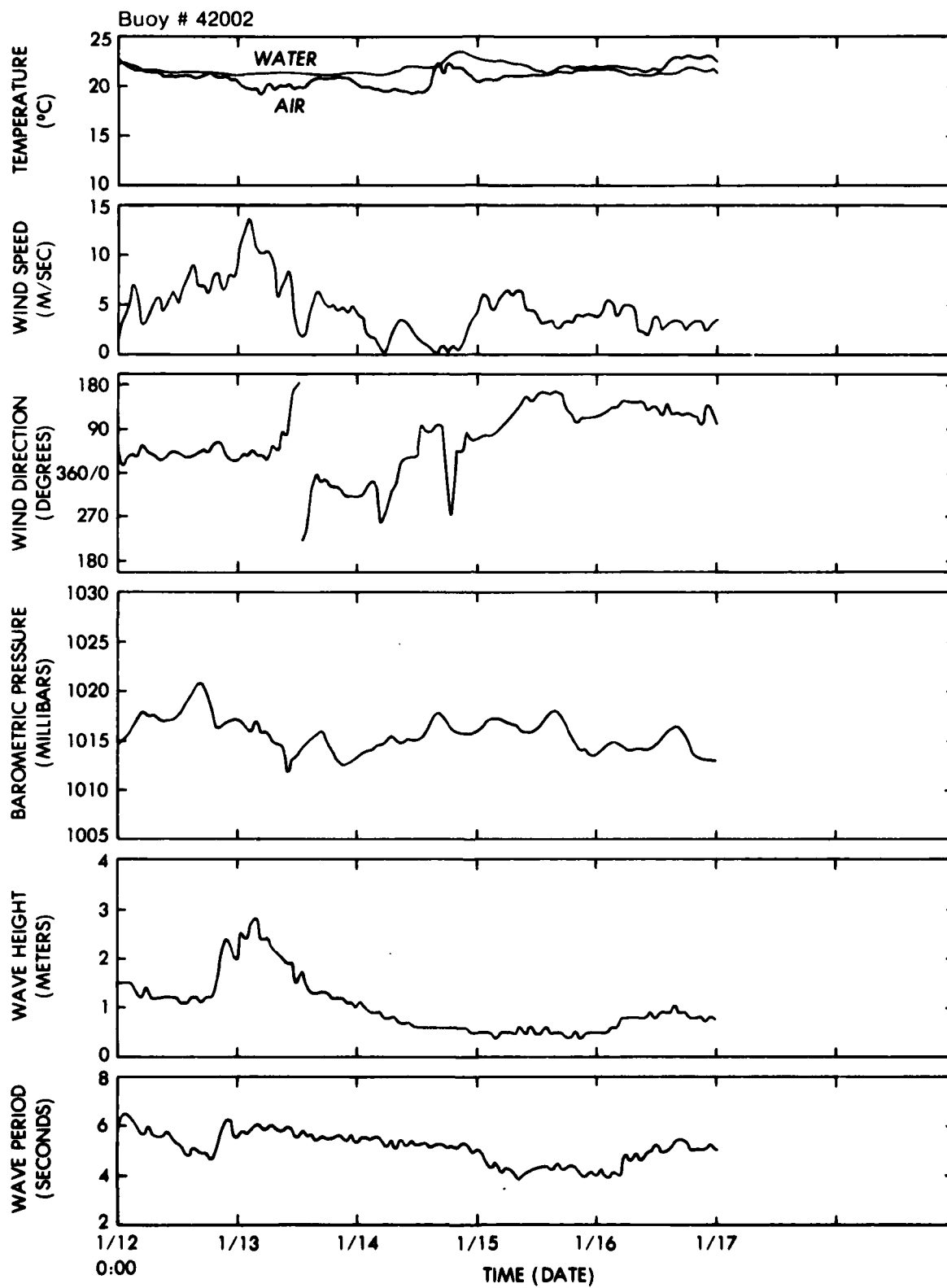


Figure 500.

5.2 Meteorological Charts for the Period of the Study (Figures 501-550)

MONDAY, DECEMBER 10, 1979

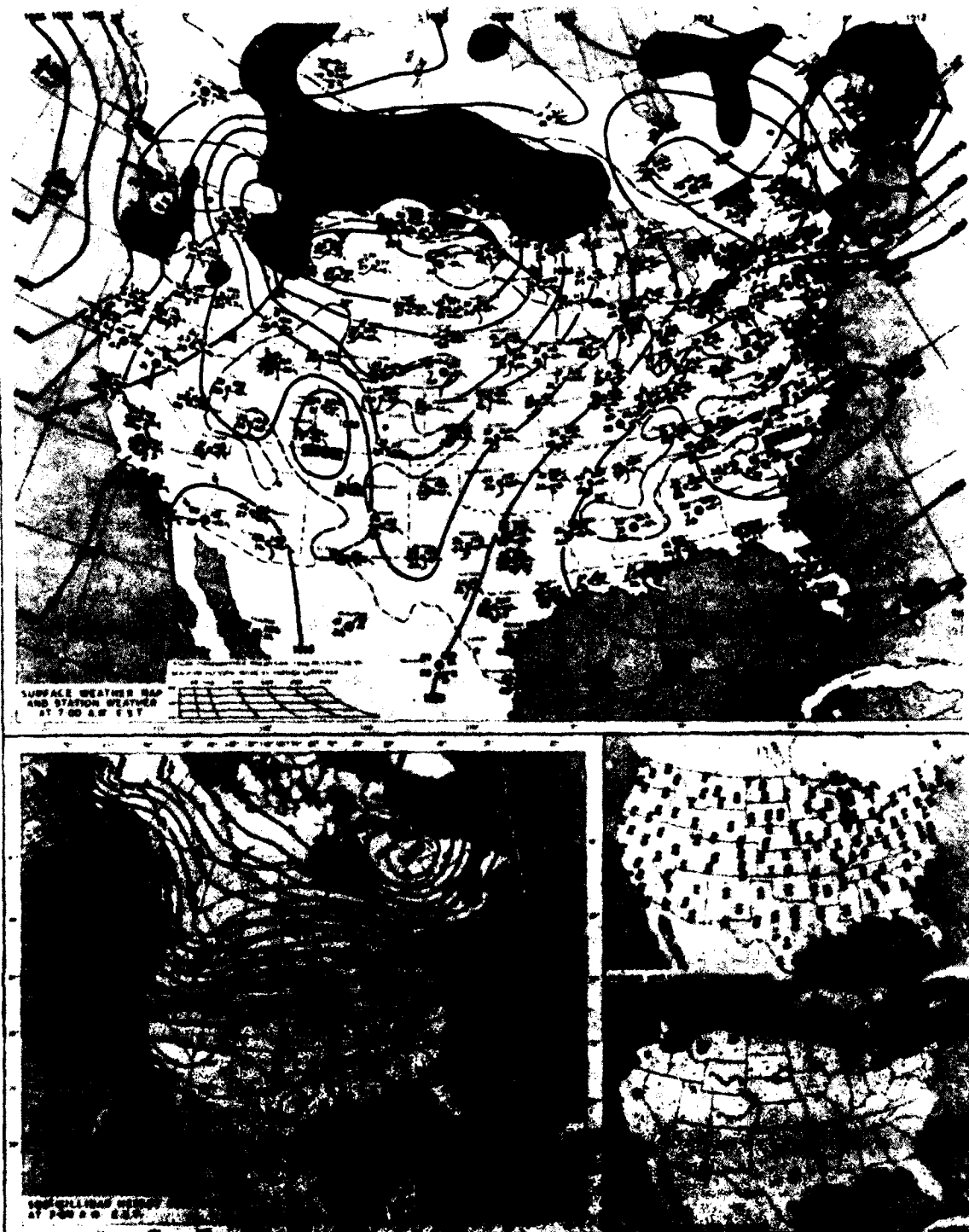


Figure 501.

TUESDAY OCTOBER 11 1972

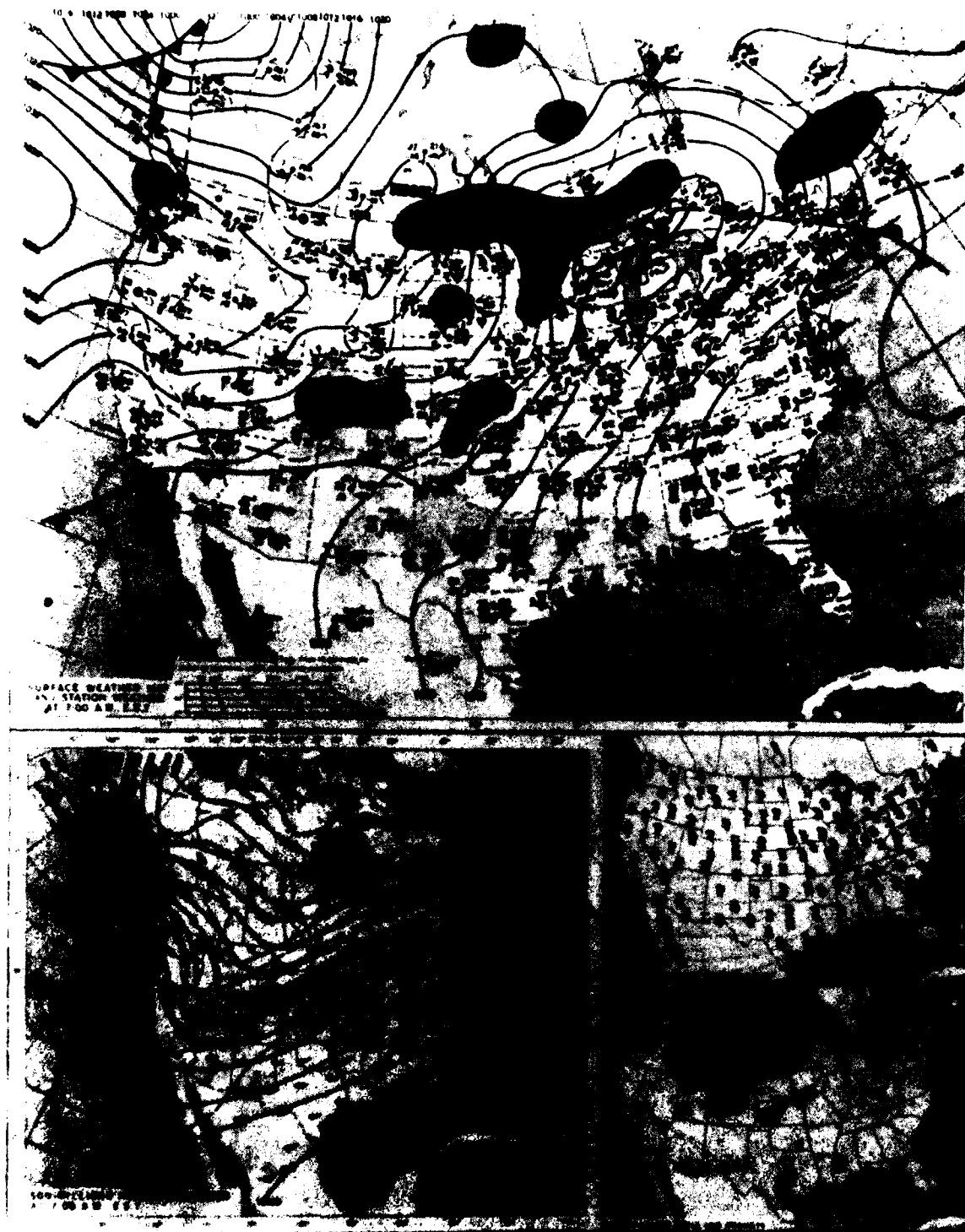


Figure 502.

WEDNESDAY DECEMBER 12, 1970

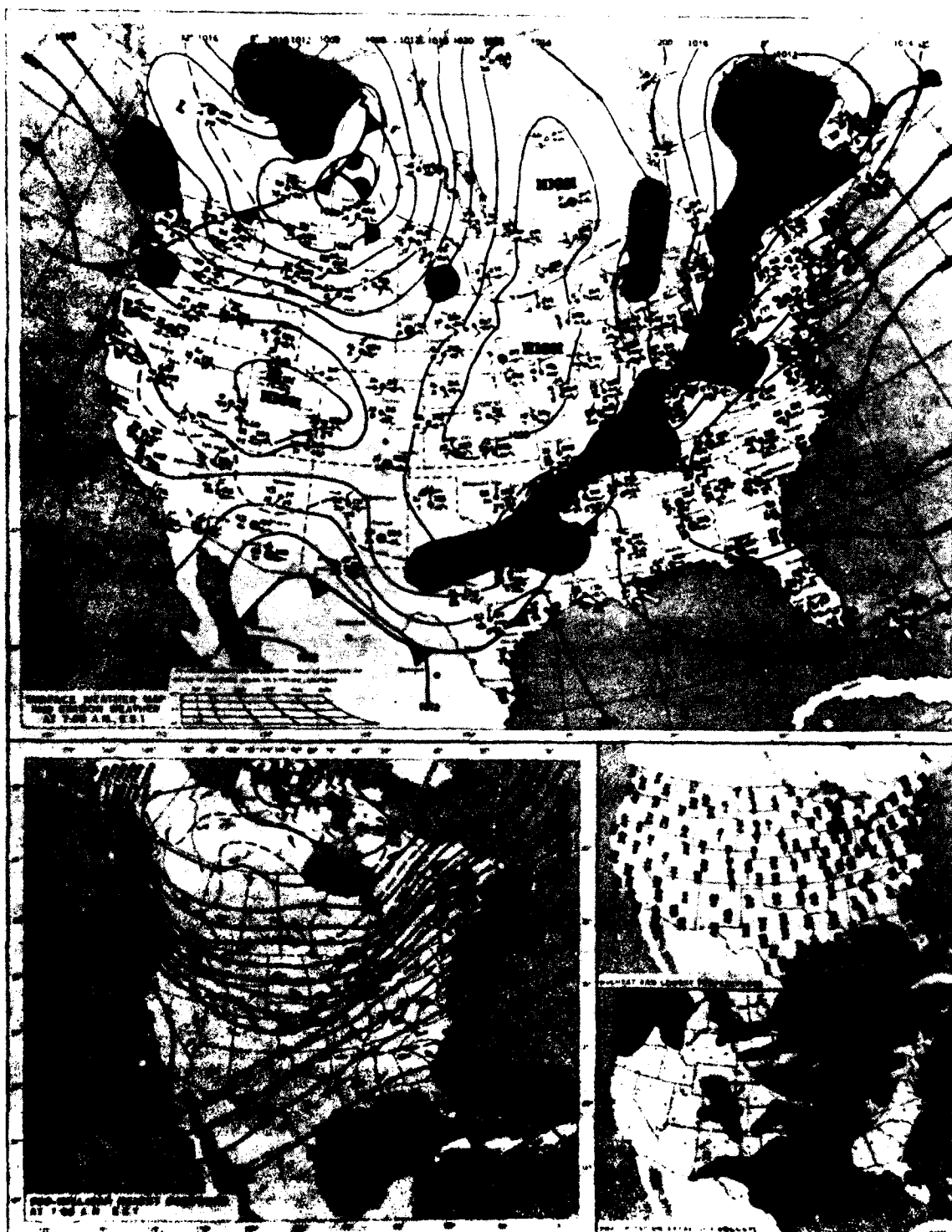


Figure 503.

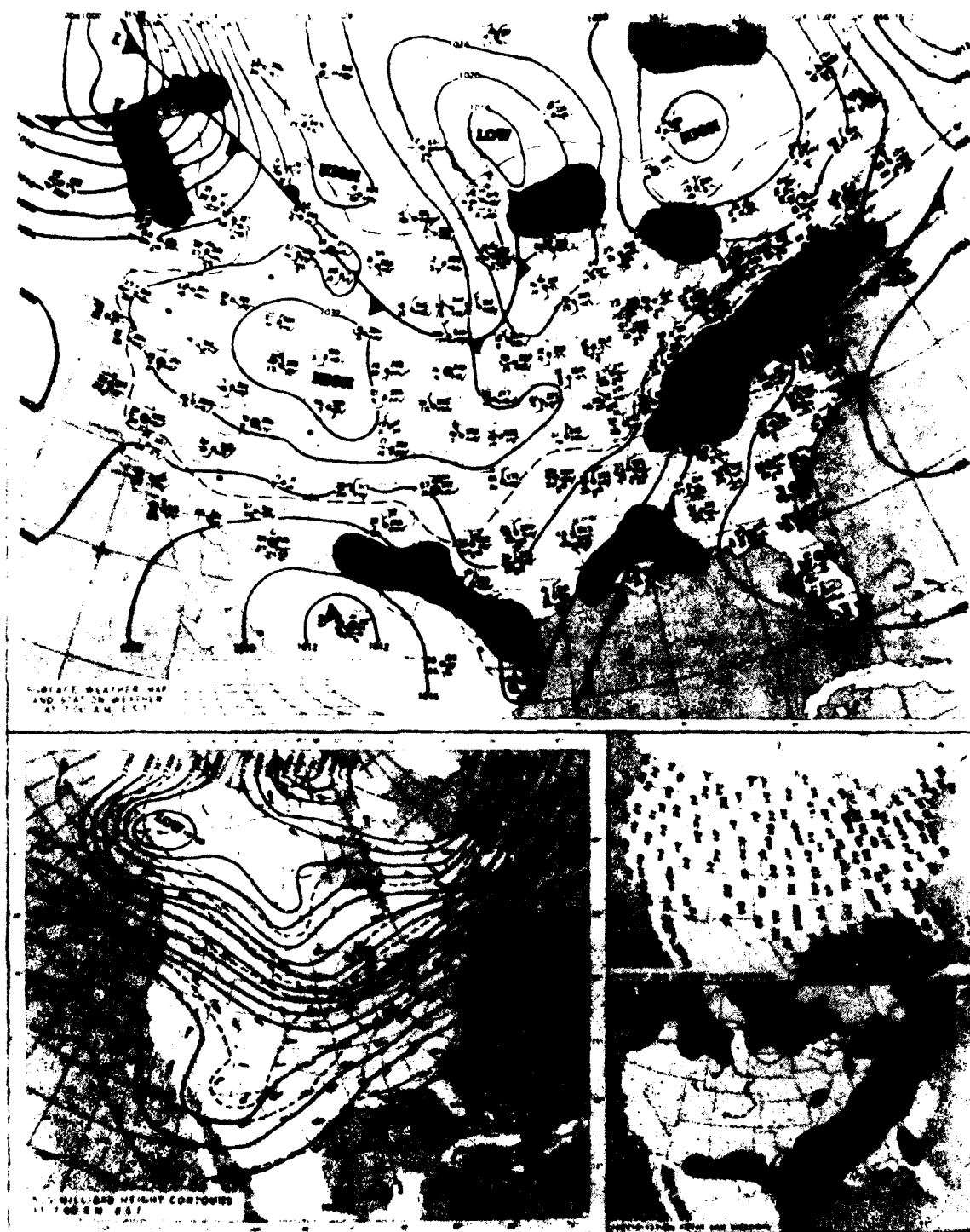


Figure 504.

FRIDAY, DECEMBER 14, 1979

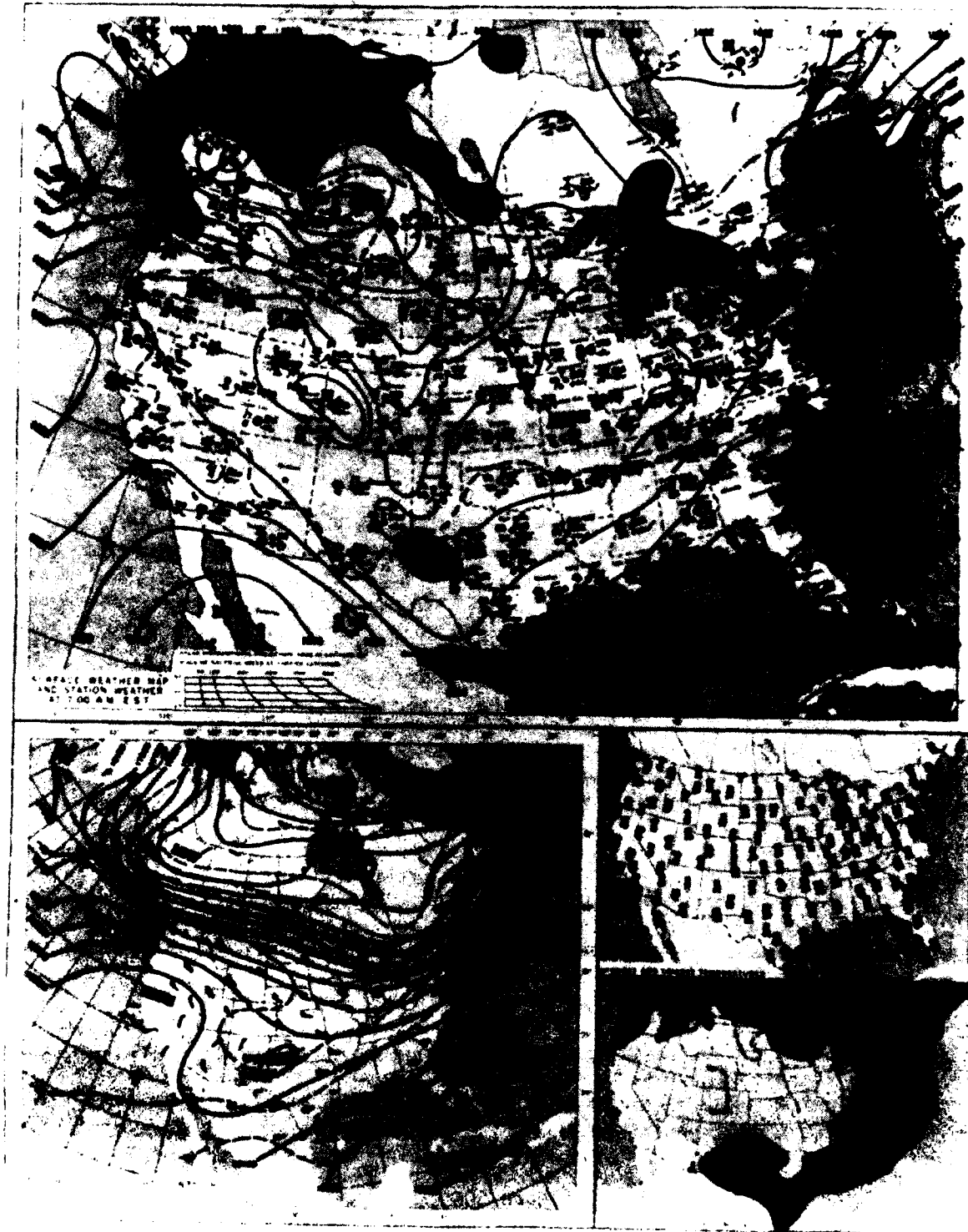


Figure 505.

SATURDAY, DECEMBER 11, 1970

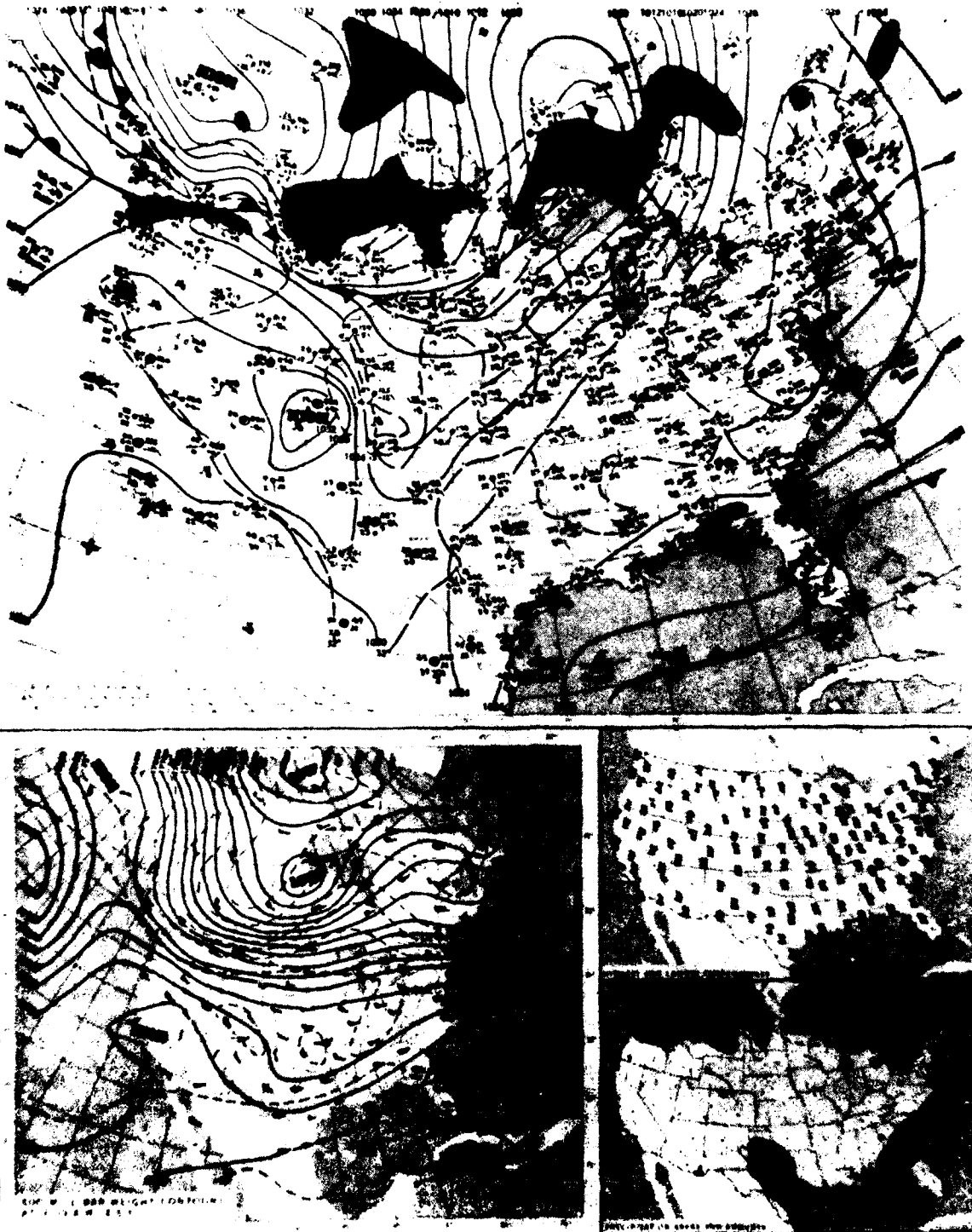


Figure 506.

SUNDAY DECEMBER 16, 1979

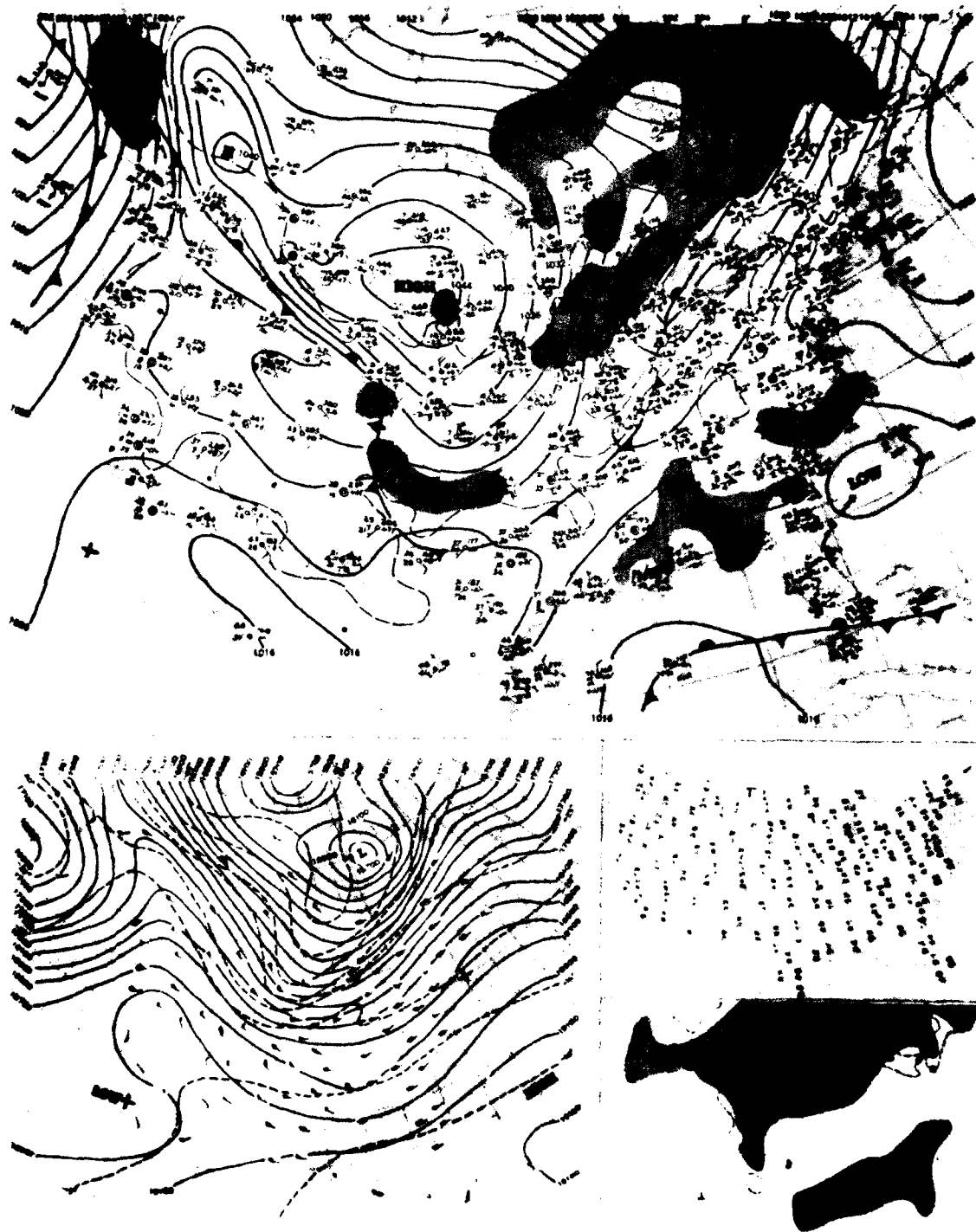


Figure 507.

MONDAY, DECEMBER 17, 1979

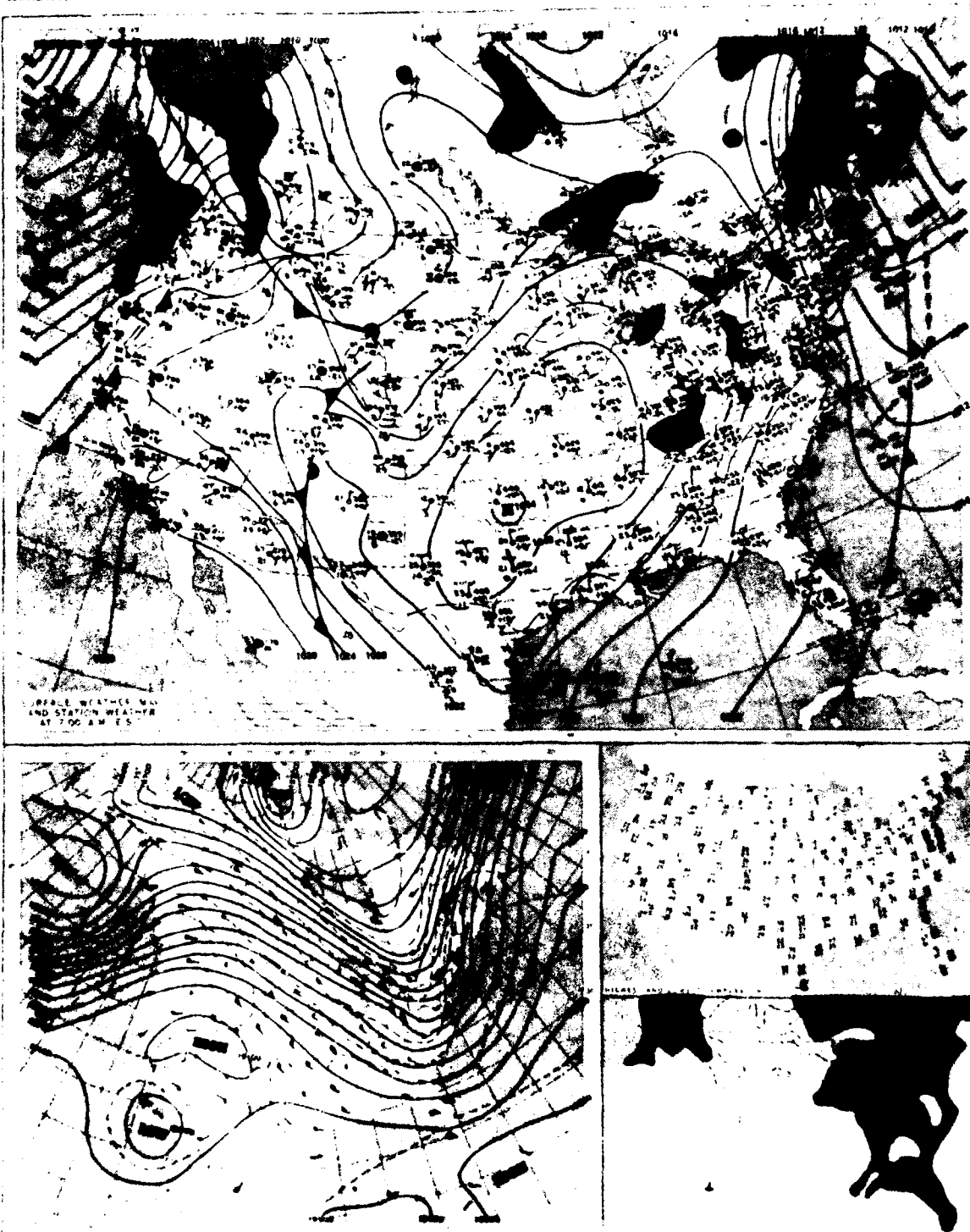


Figure 508.

TUESDAY, DECEMBER 1, 1953

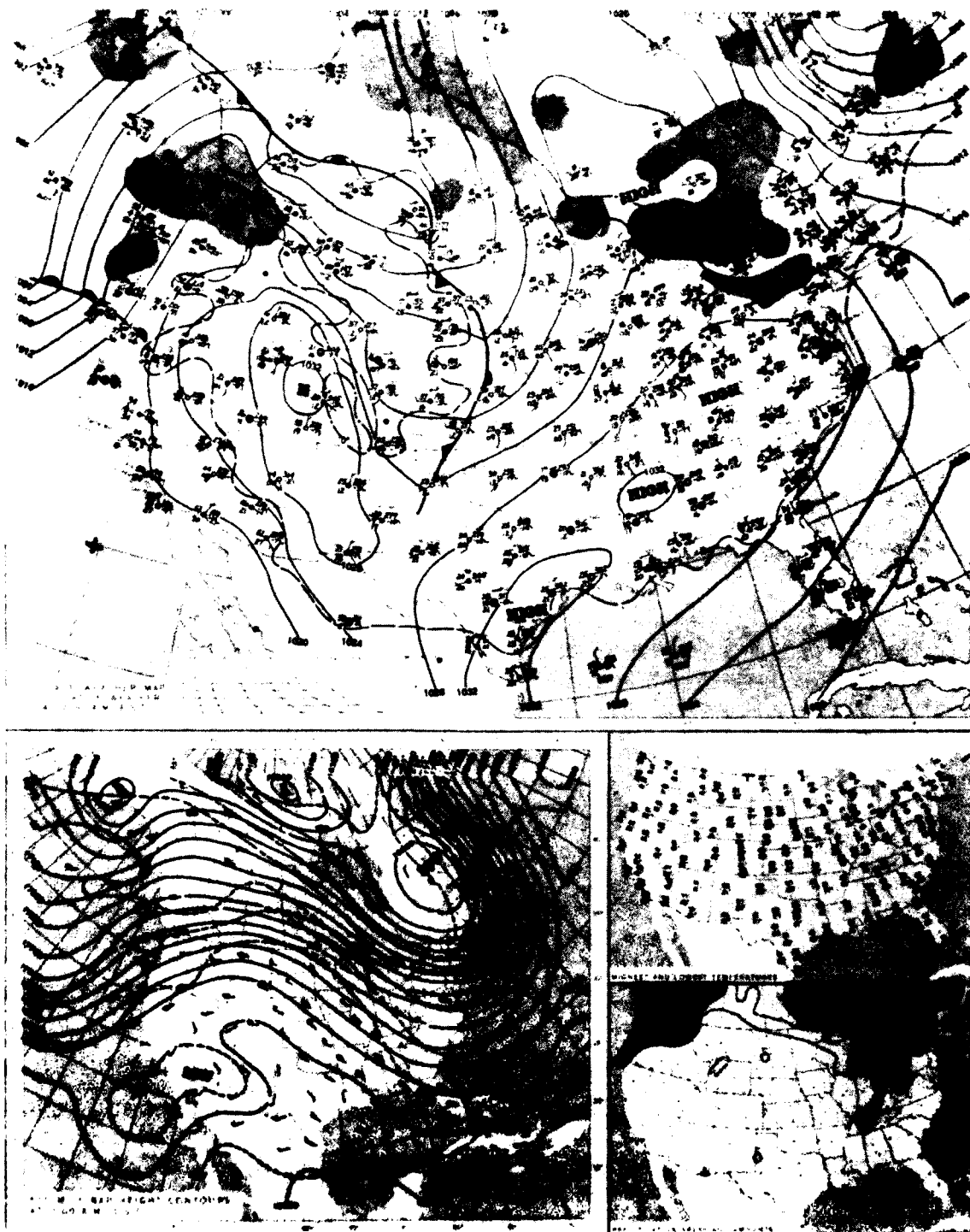


Figure 509.

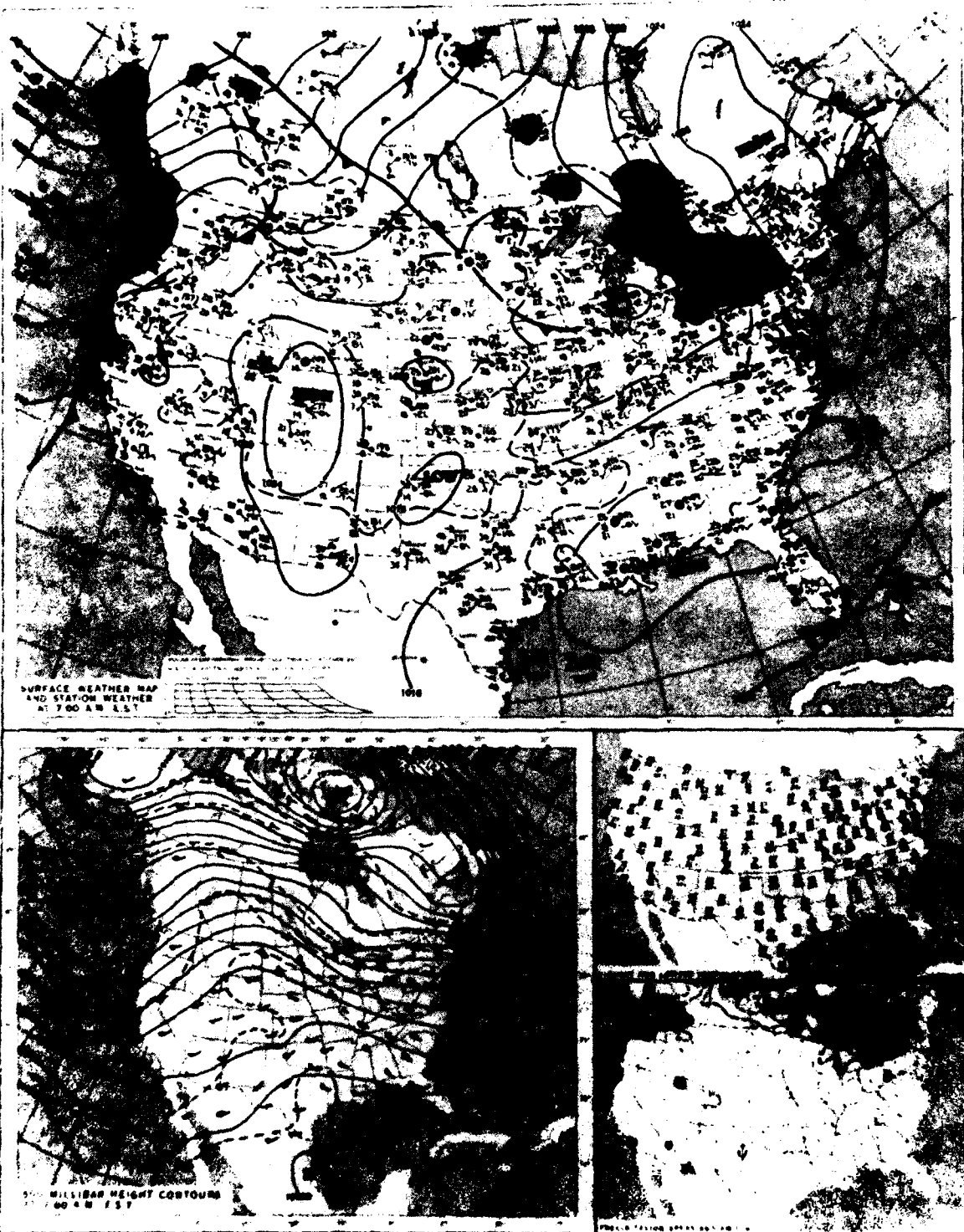


Figure 510.

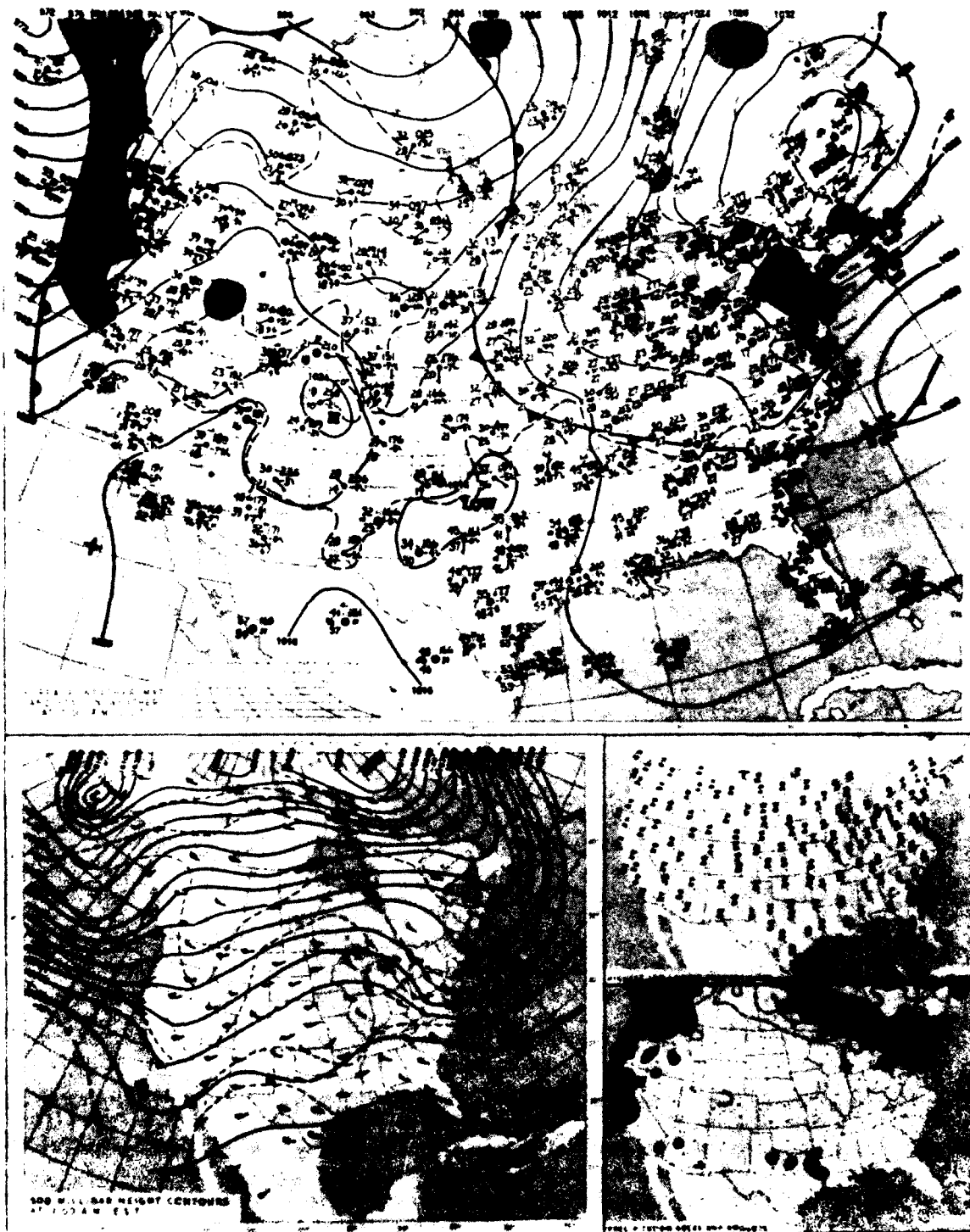


Figure 511.

FRIDAY 10 OCTOBER 21, 1979



Figure 512.

SATURDAY, NOVEMBER 22, 19

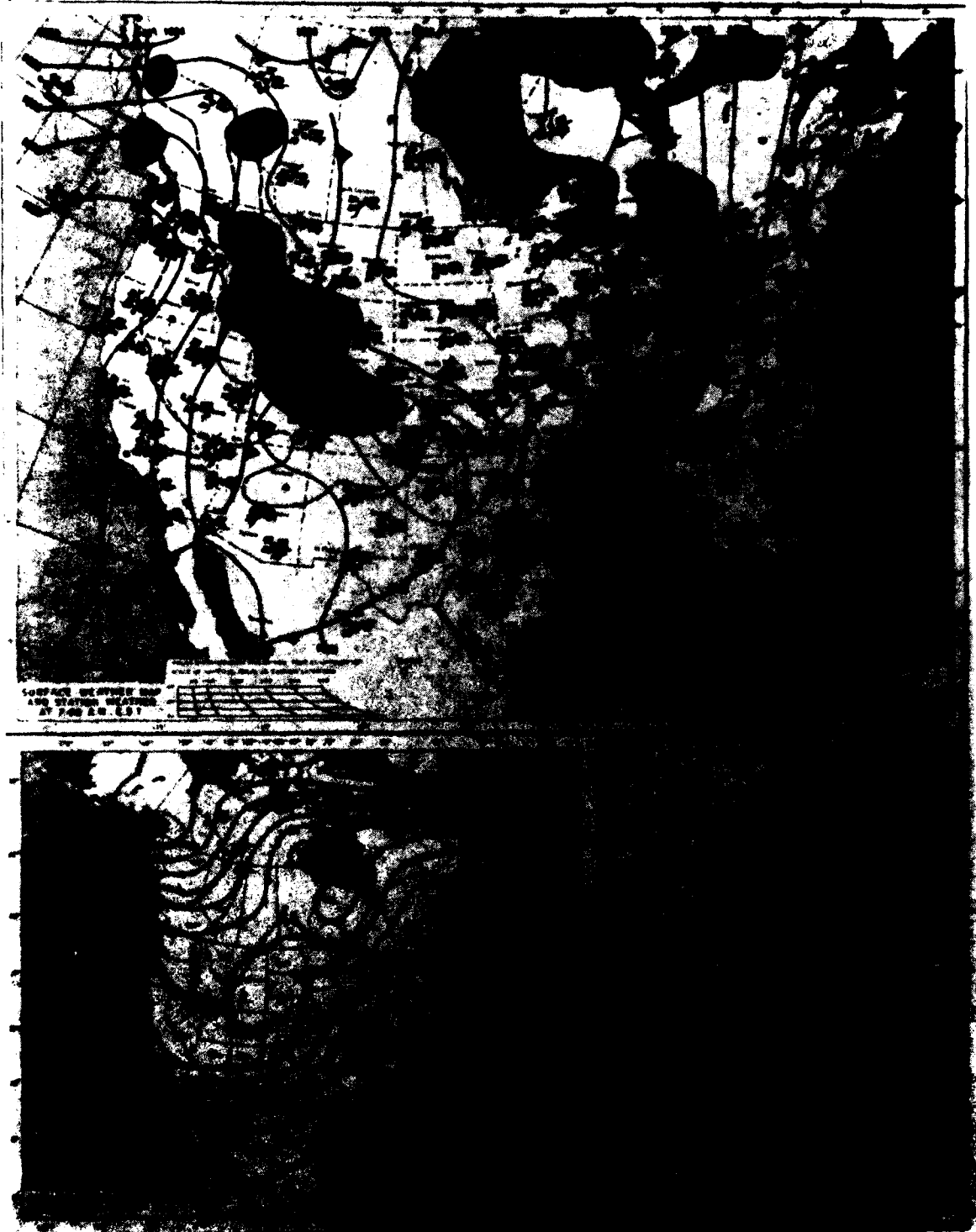


Figure 513.

SUNDAY, DECEMBER 28, 1969



Figure 514.

ONDAY, DECEMBER 24, 1979



Figure 515.

TUESDAY, 10A ENRER 28, 1979

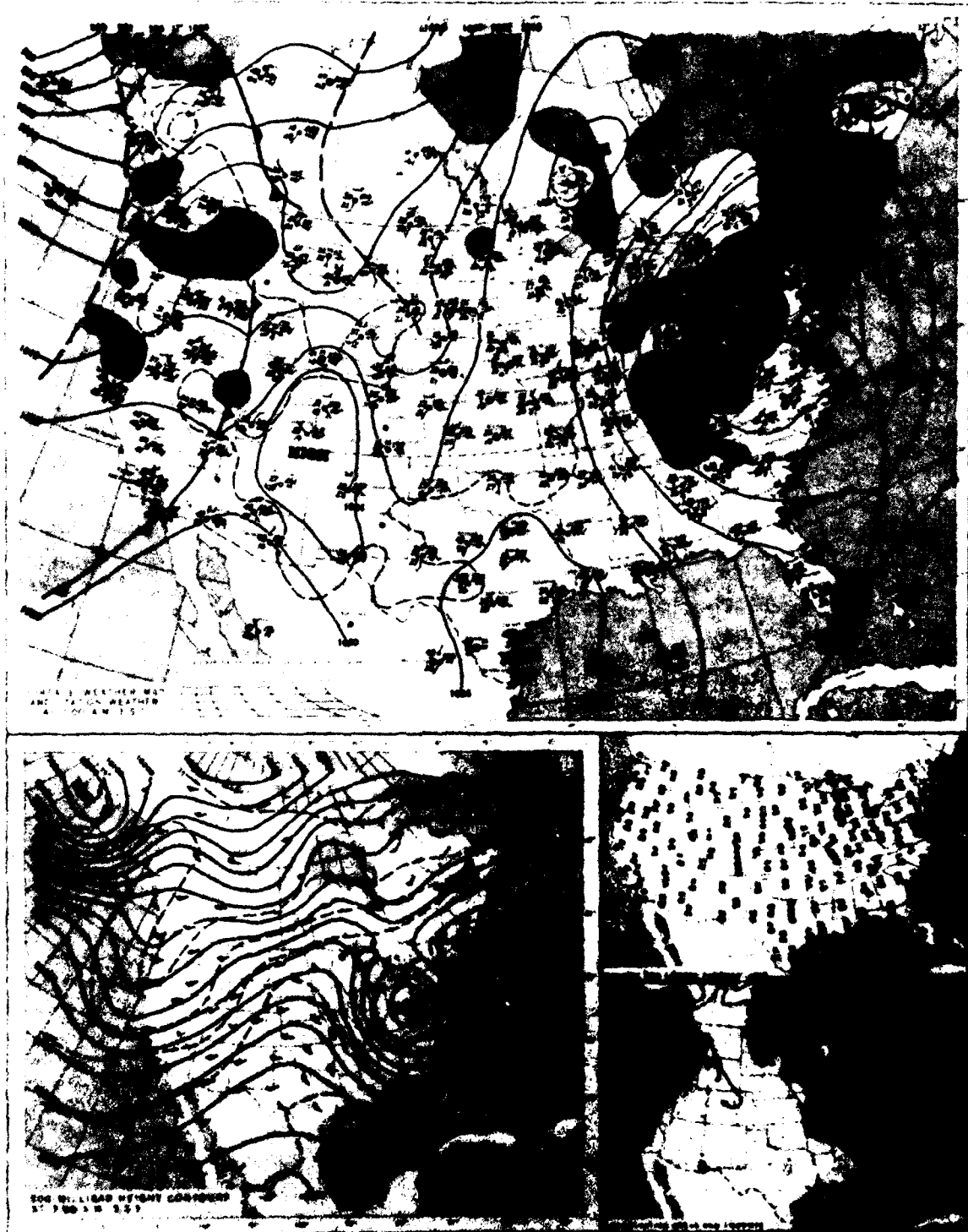


Figure 516.

WEDNESDAY, DECEMBER 26, 1979

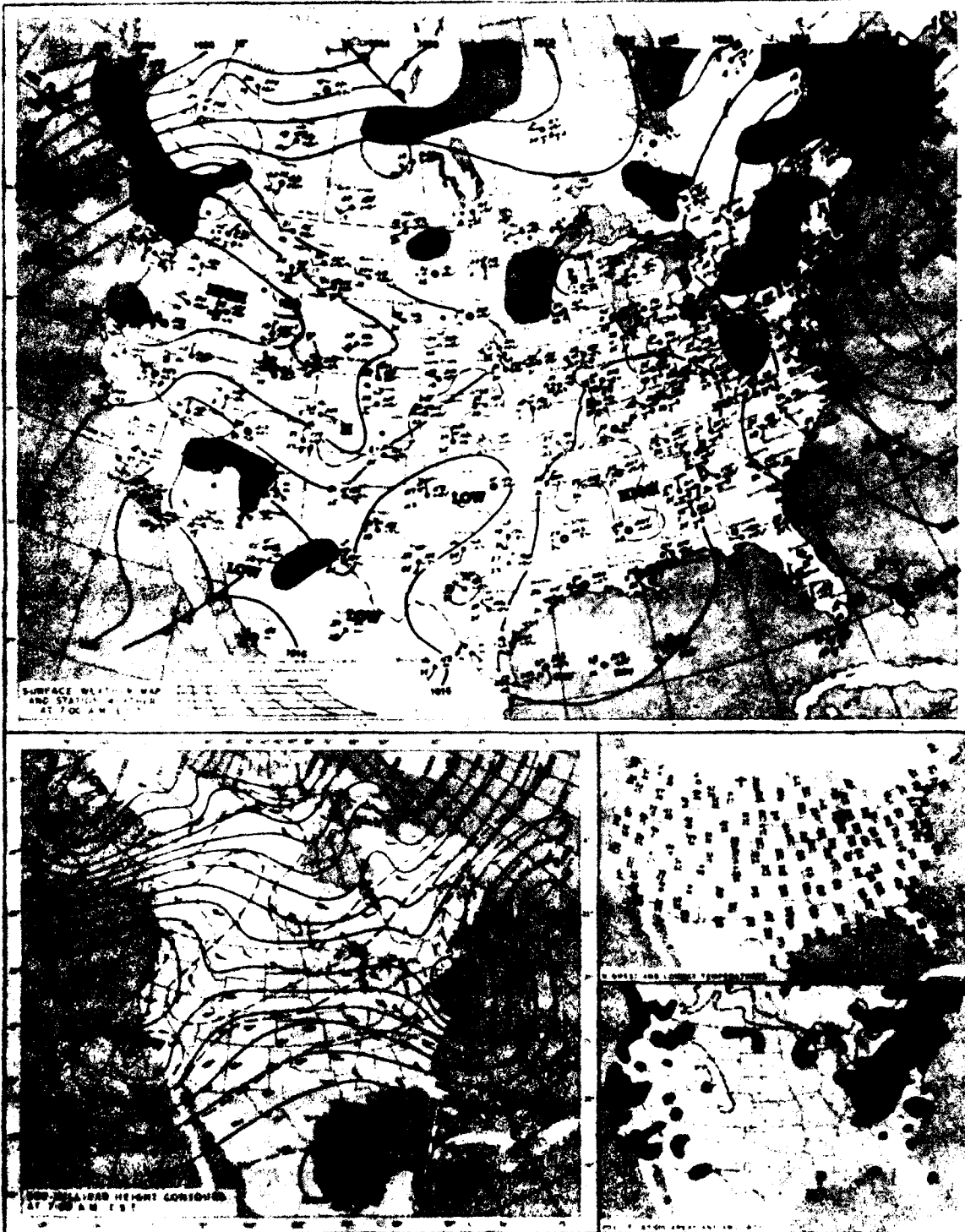


Figure 517.

THURSDAY, DECEMBER 27, 1979

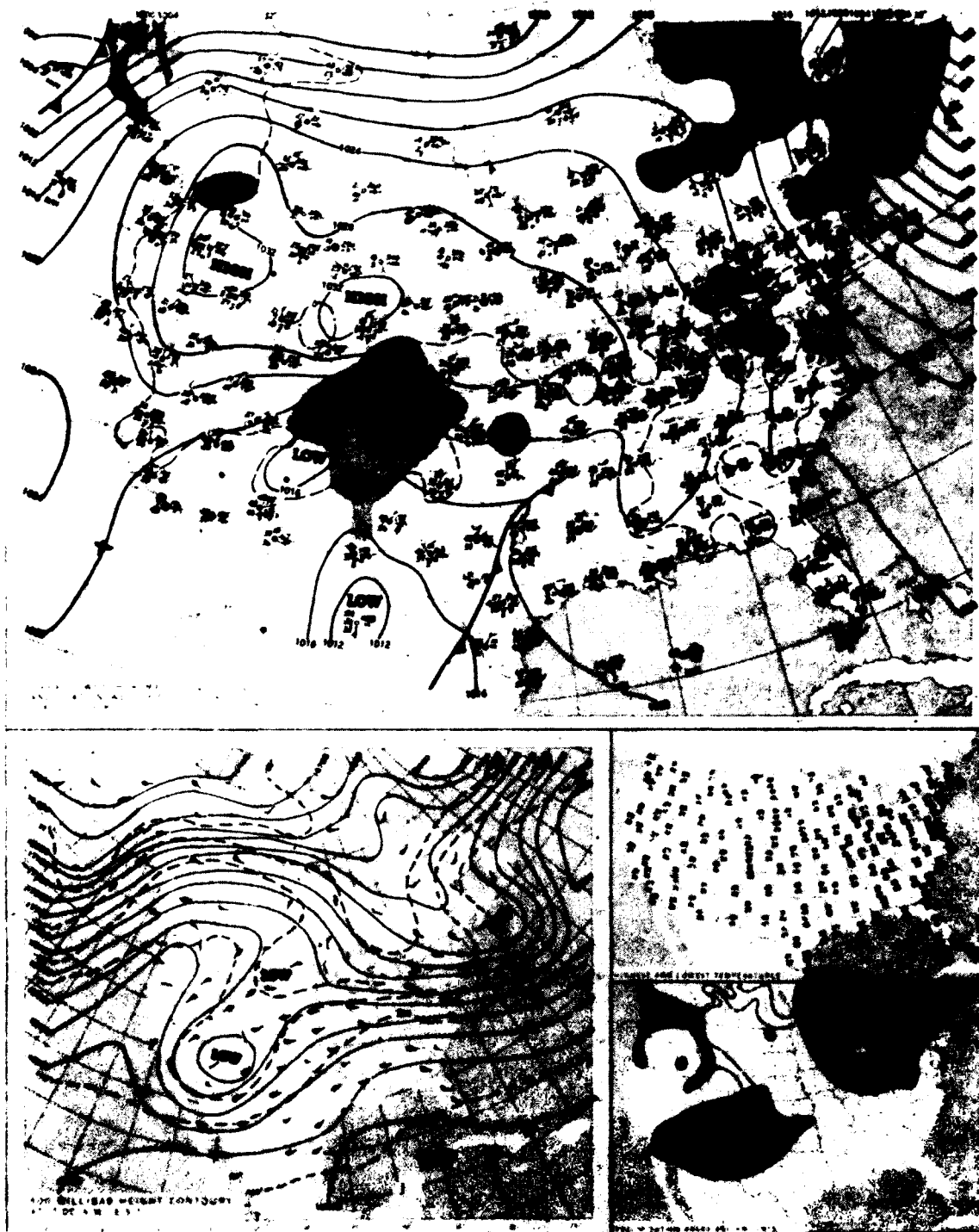


Figure 518.

REDAI, DECEMBER 22, 1970

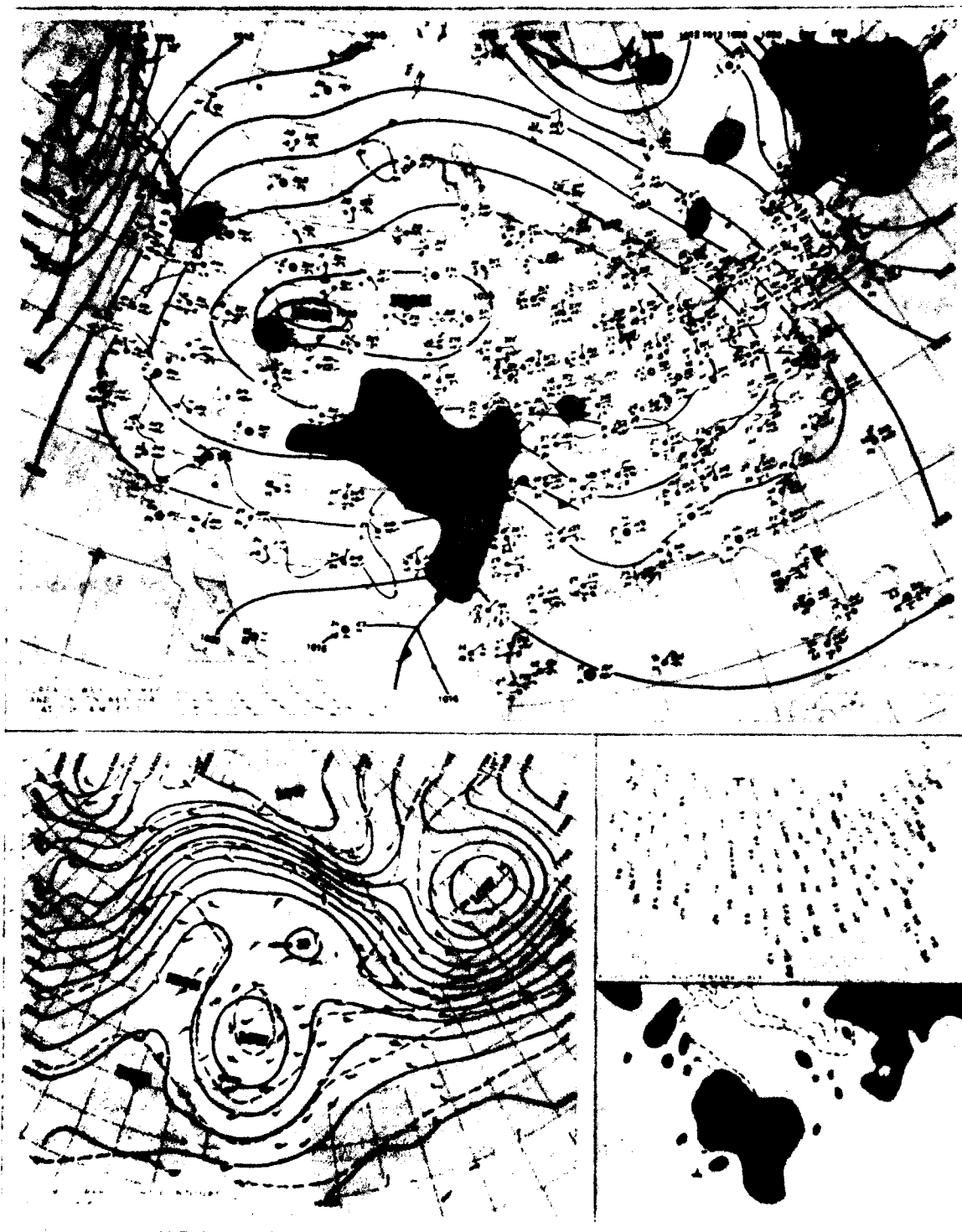


Figure 519.

SATURDAY, DECEMBER 30, 1979

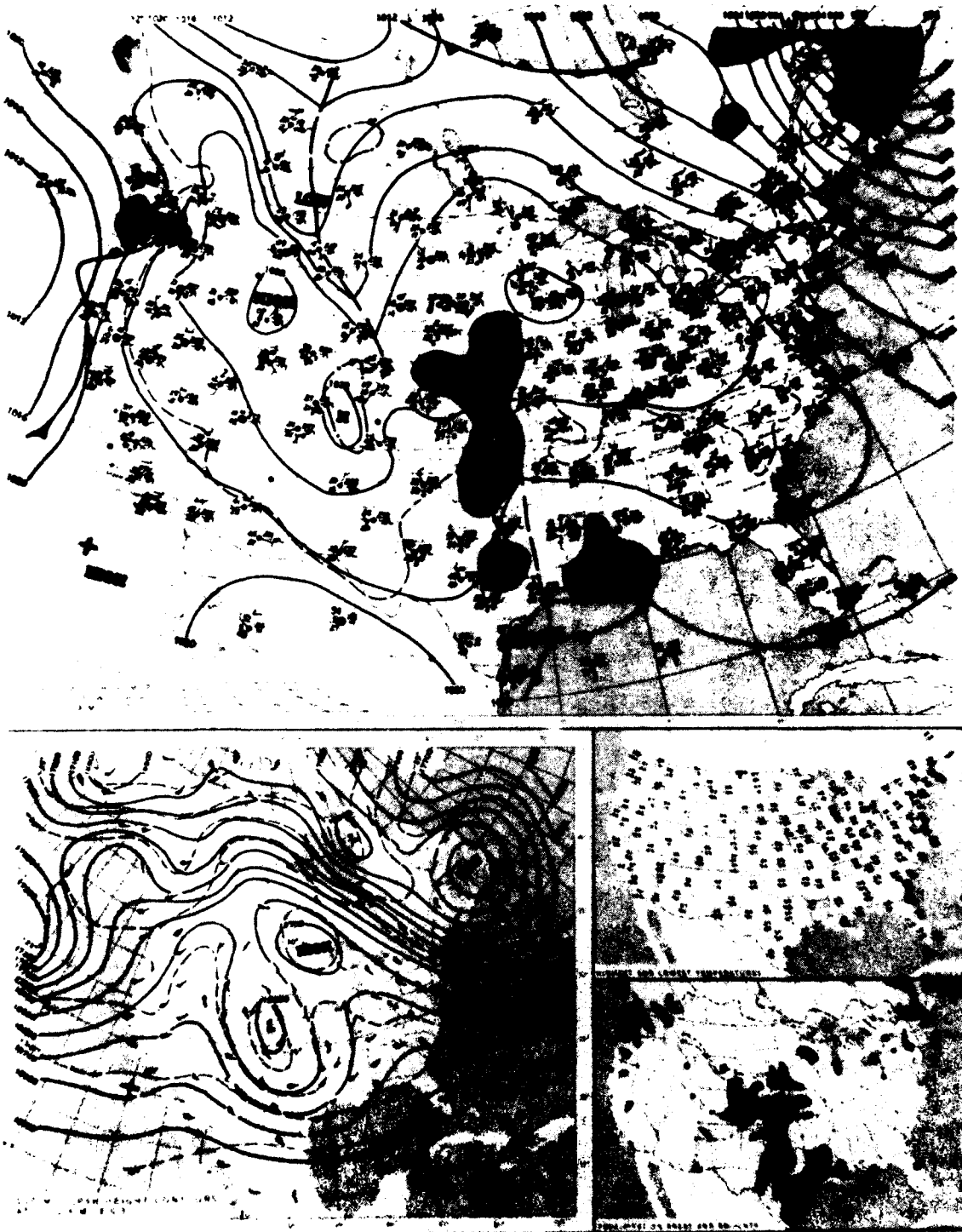


Figure 520.

SUNDAY, DECEMBER 30, 1979

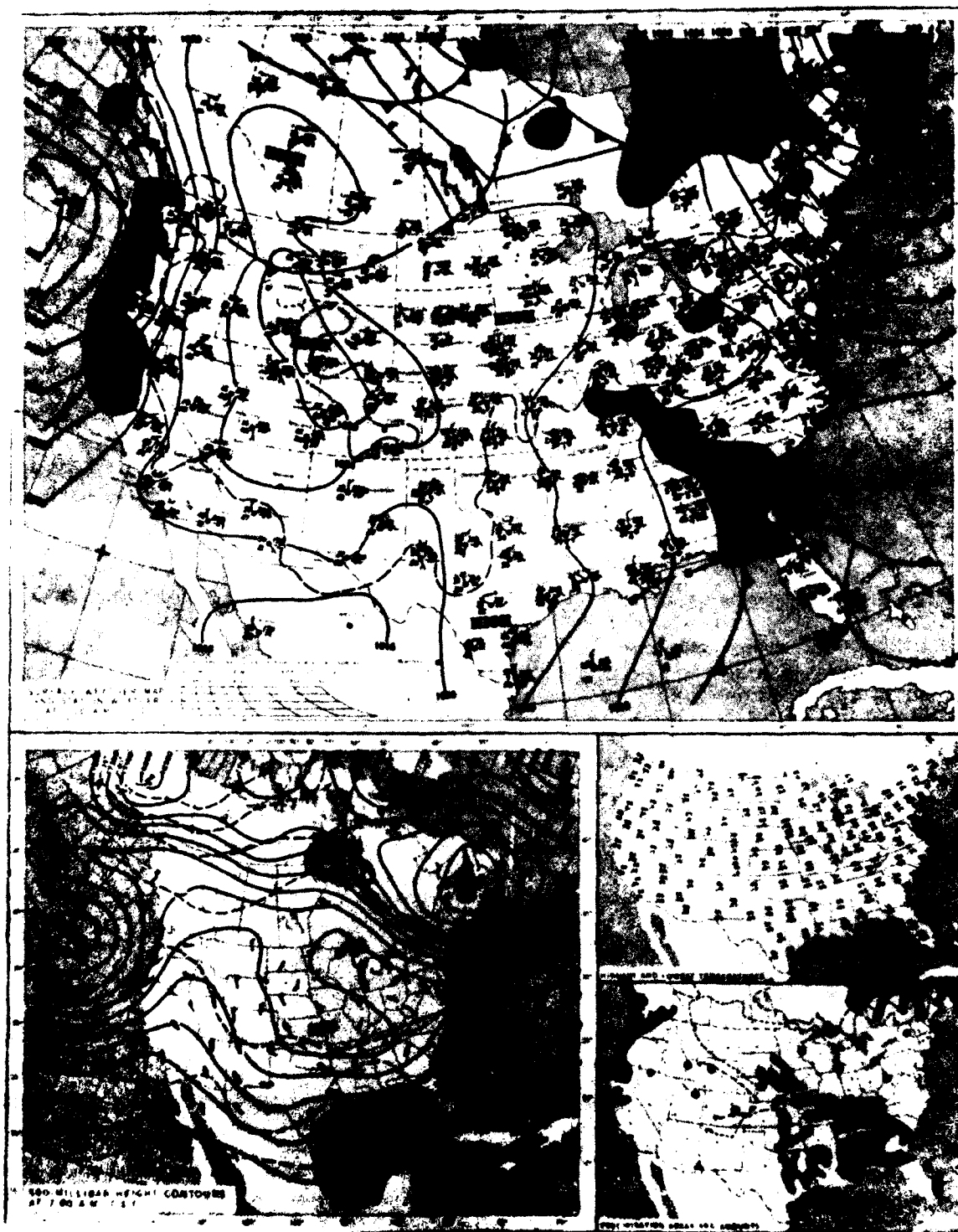


Figure 521.

MONDAY, DECEMBER 21, 1970

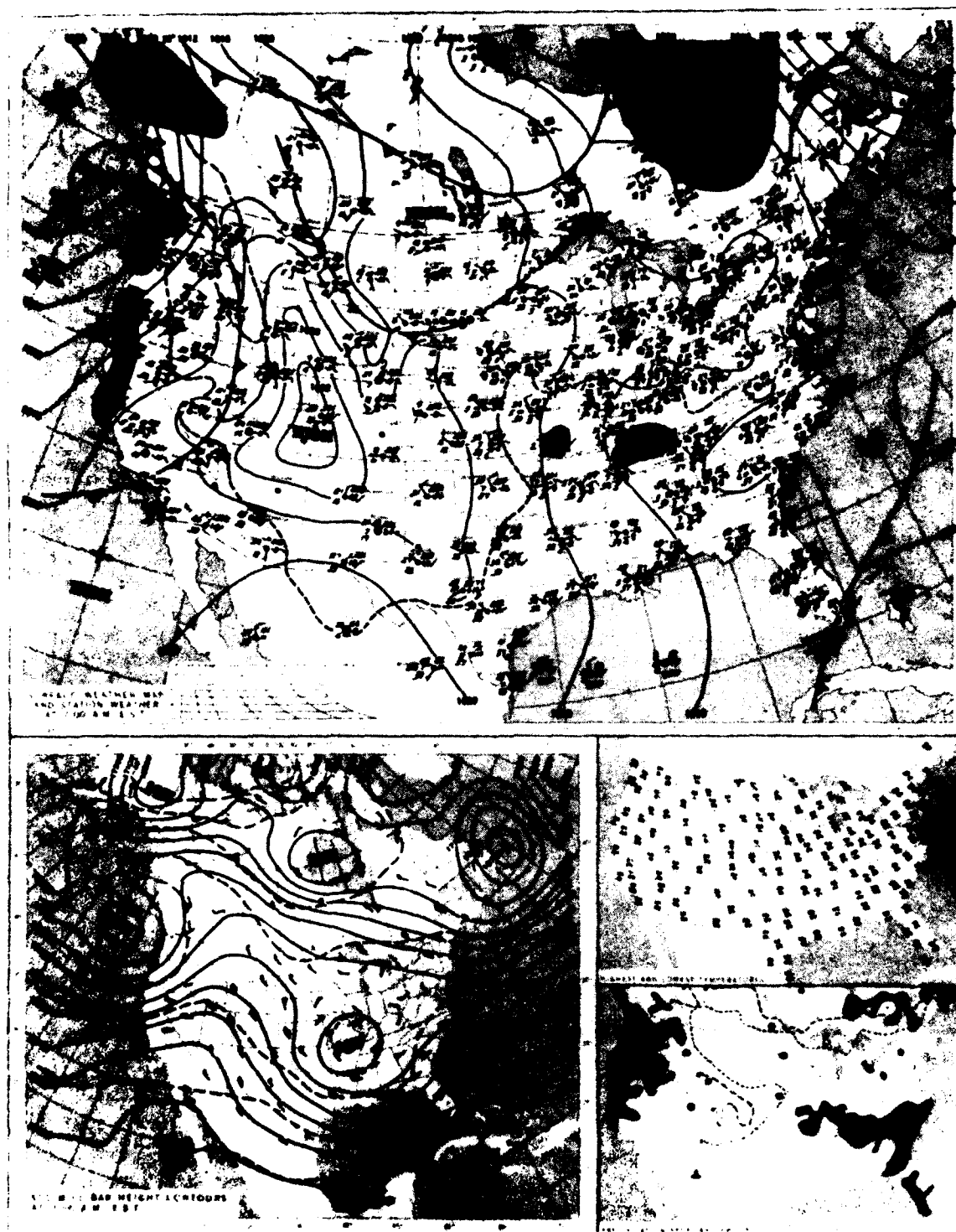


Figure 522.

TUESDAY, JANUARY 1, 1968

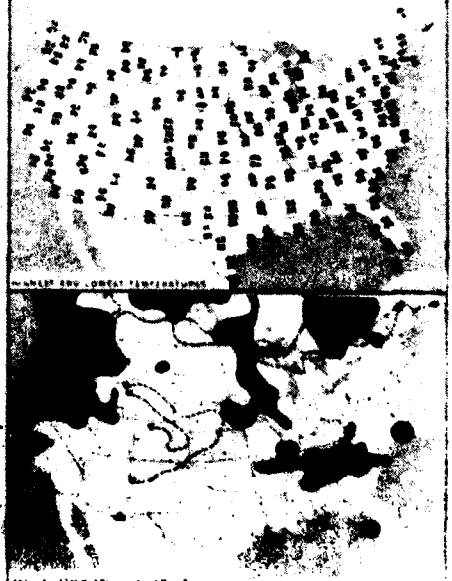
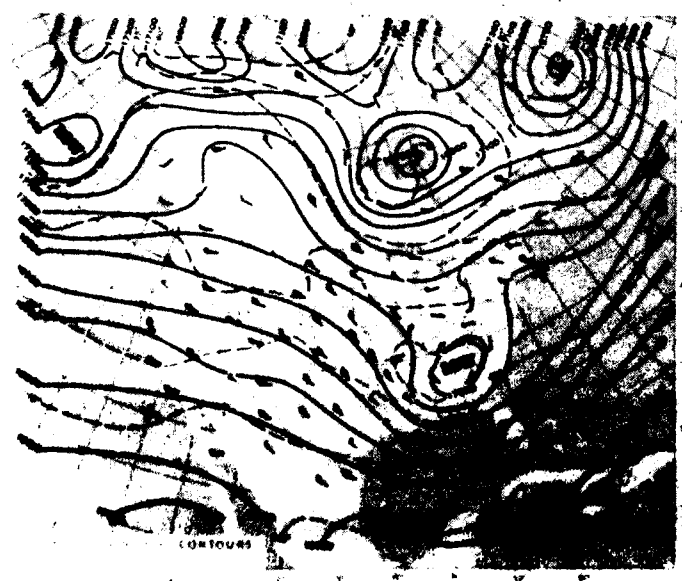
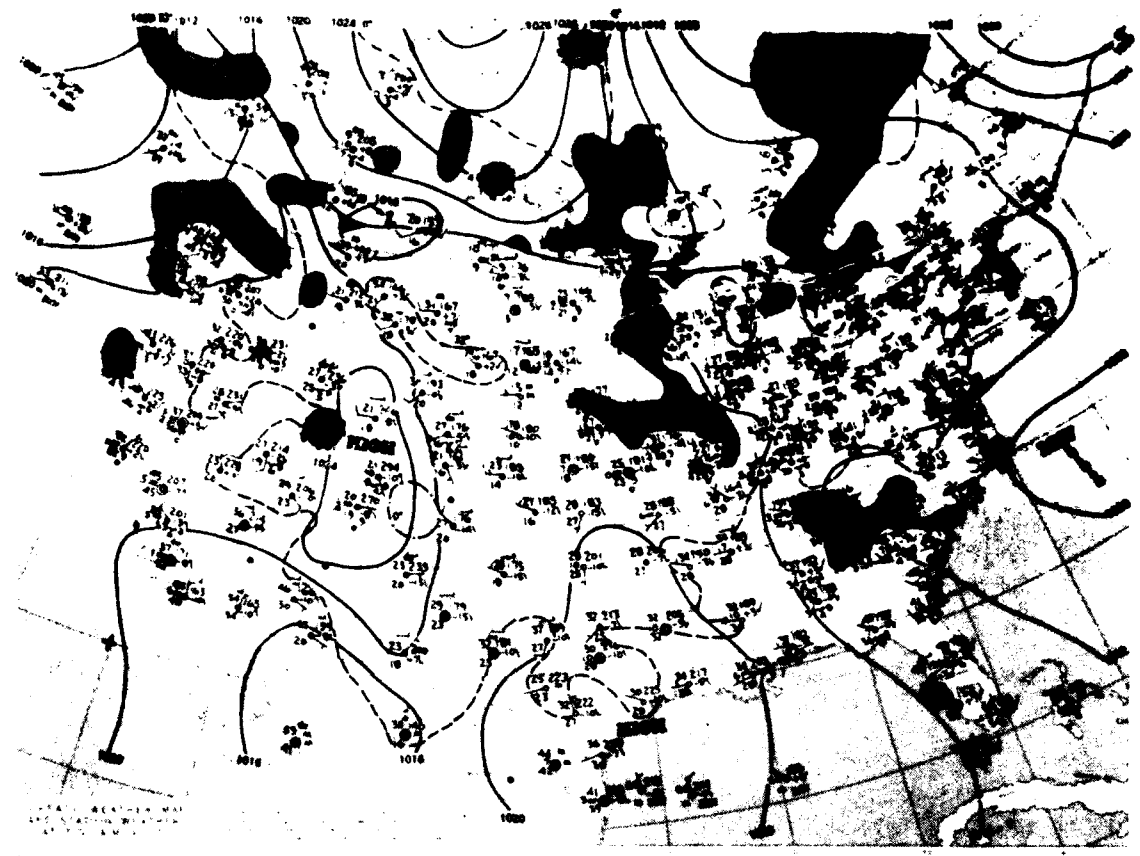


Figure 523.

WEDNESDAY JANUARY 2 1968

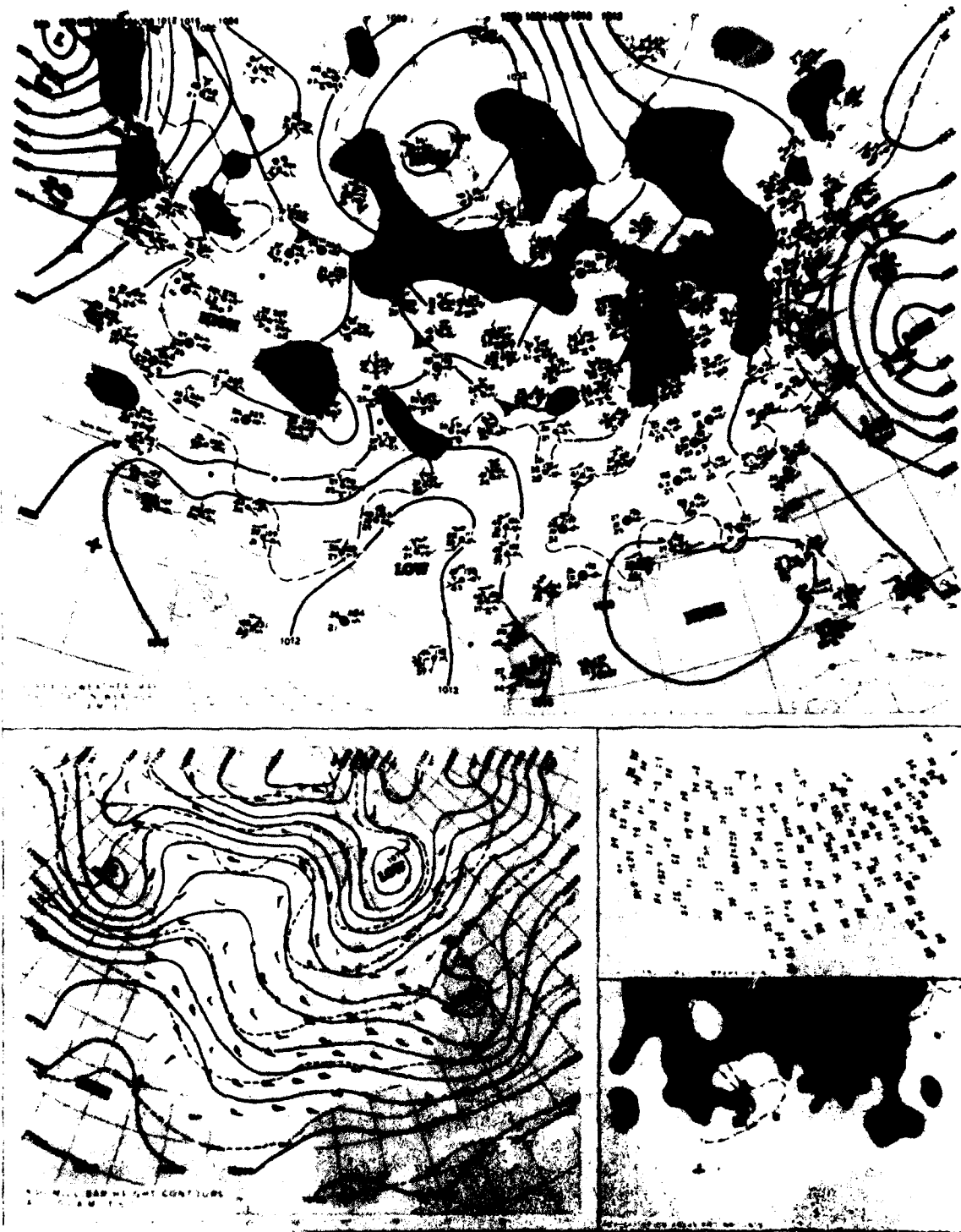


Figure 524.

THURSDAY, JANUARY 2, 1968

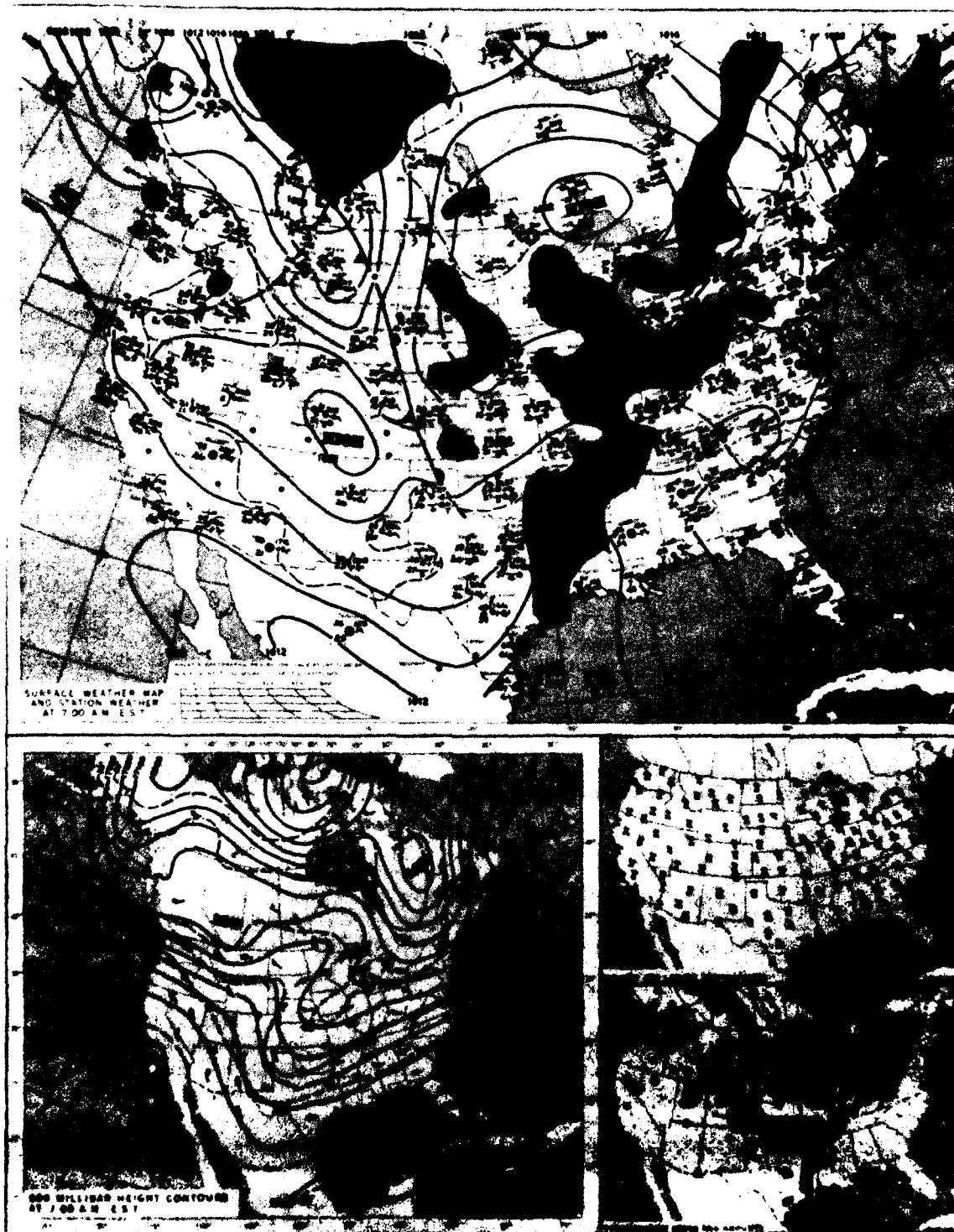


Figure 525.

FRIDAY, JANUARY 4, 1950

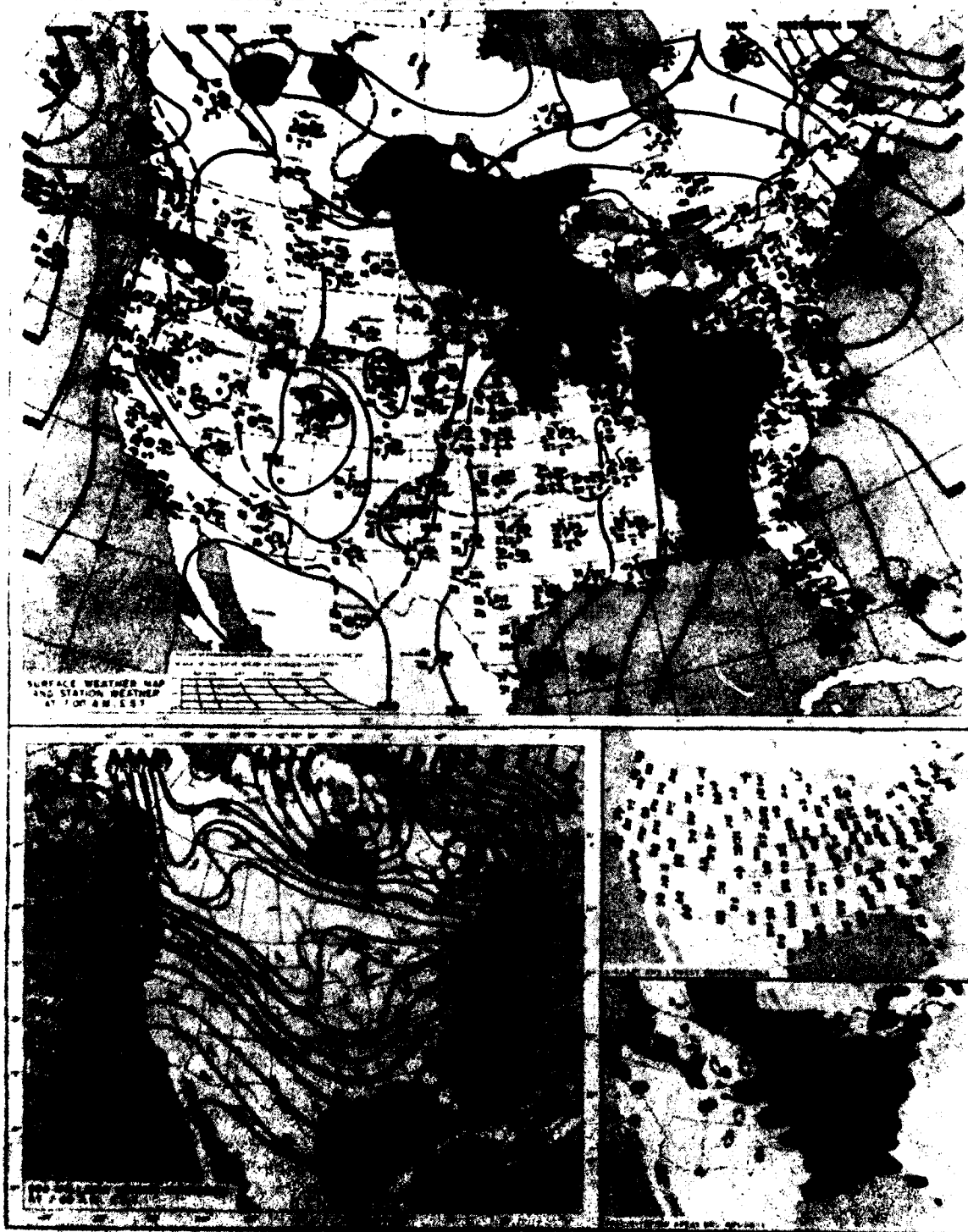


Figure 526.

SATURDAY, JANUARY 2, 1969

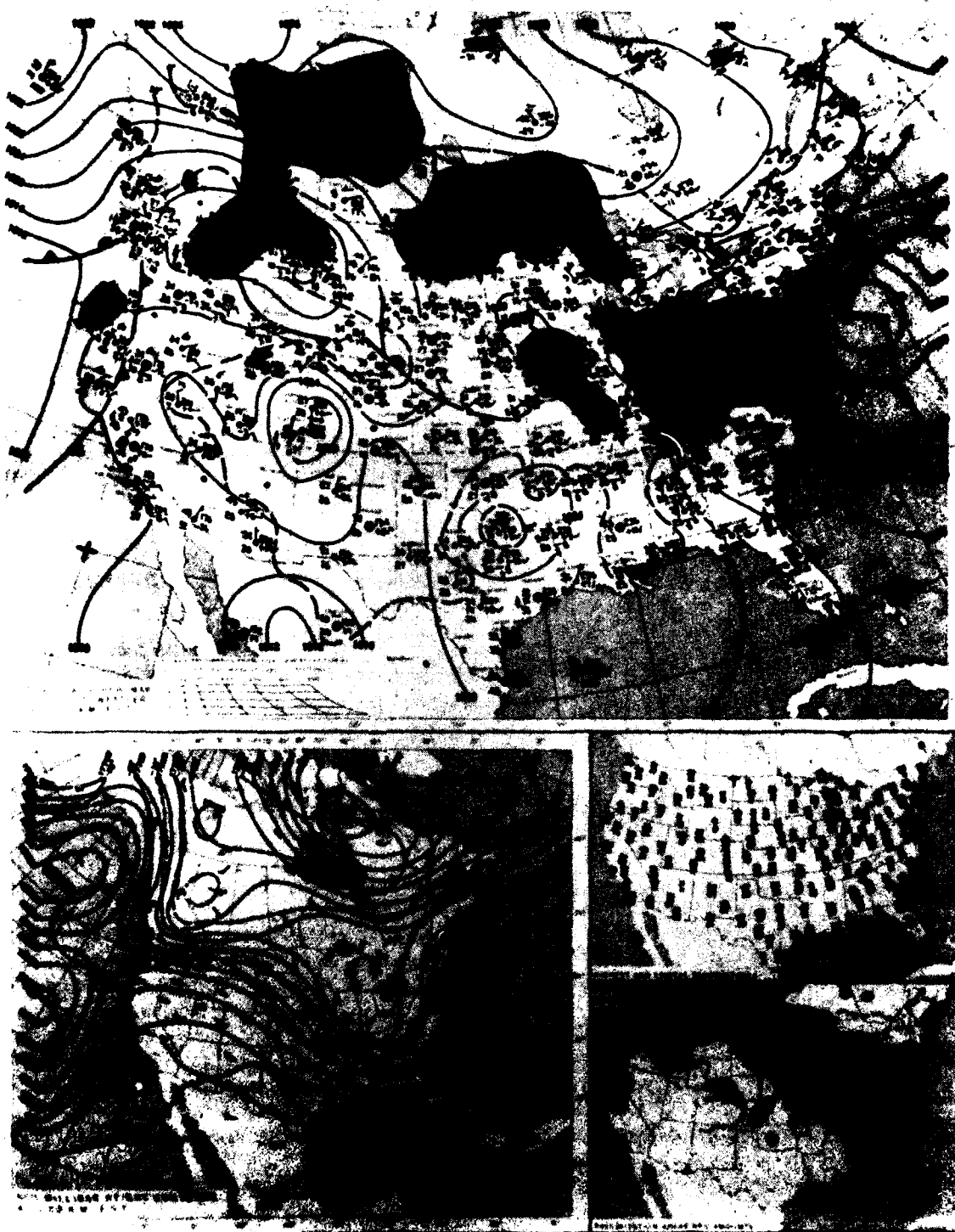


Figure 527.

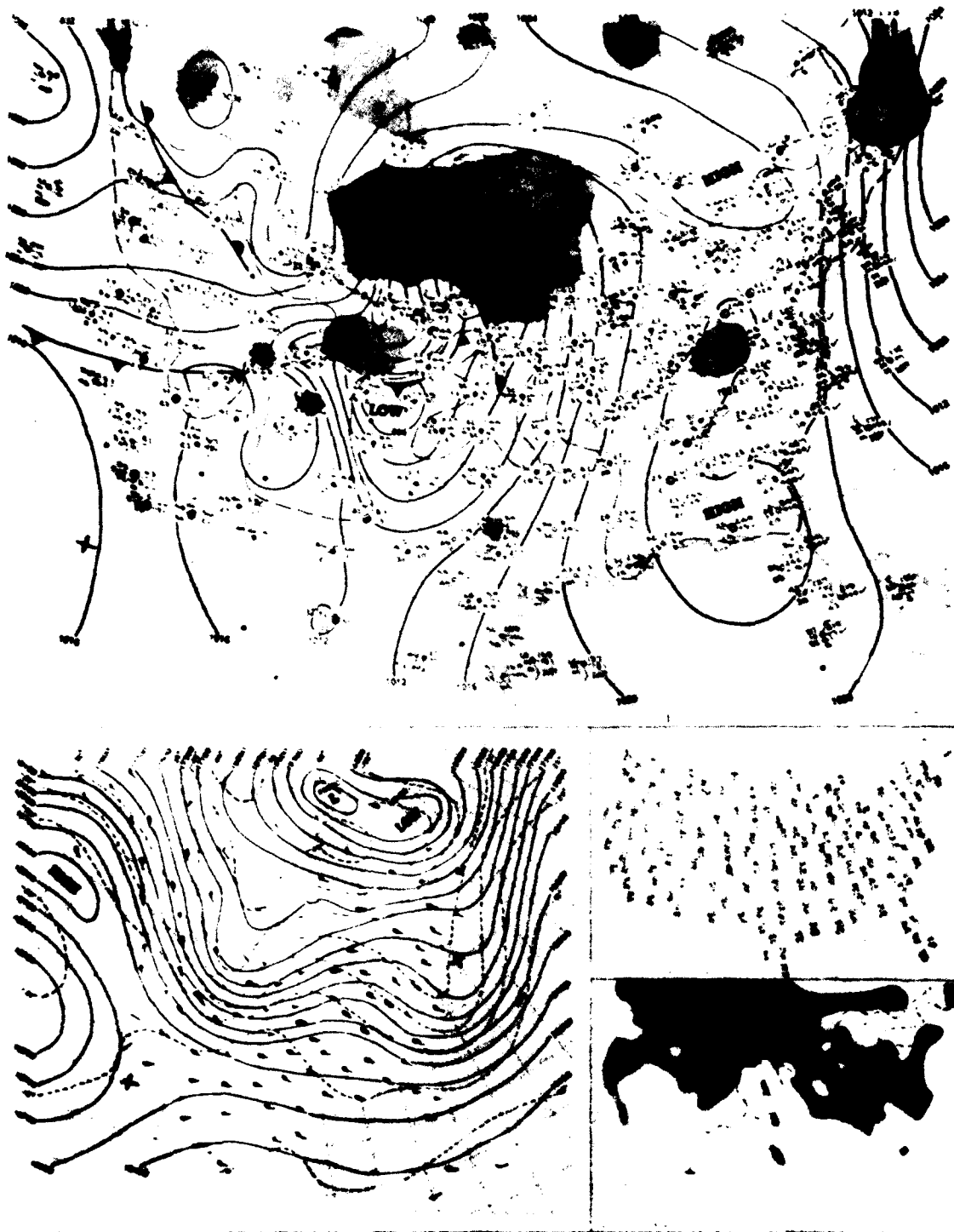


Figure 528.

MONDAY JANUARY 7 1960

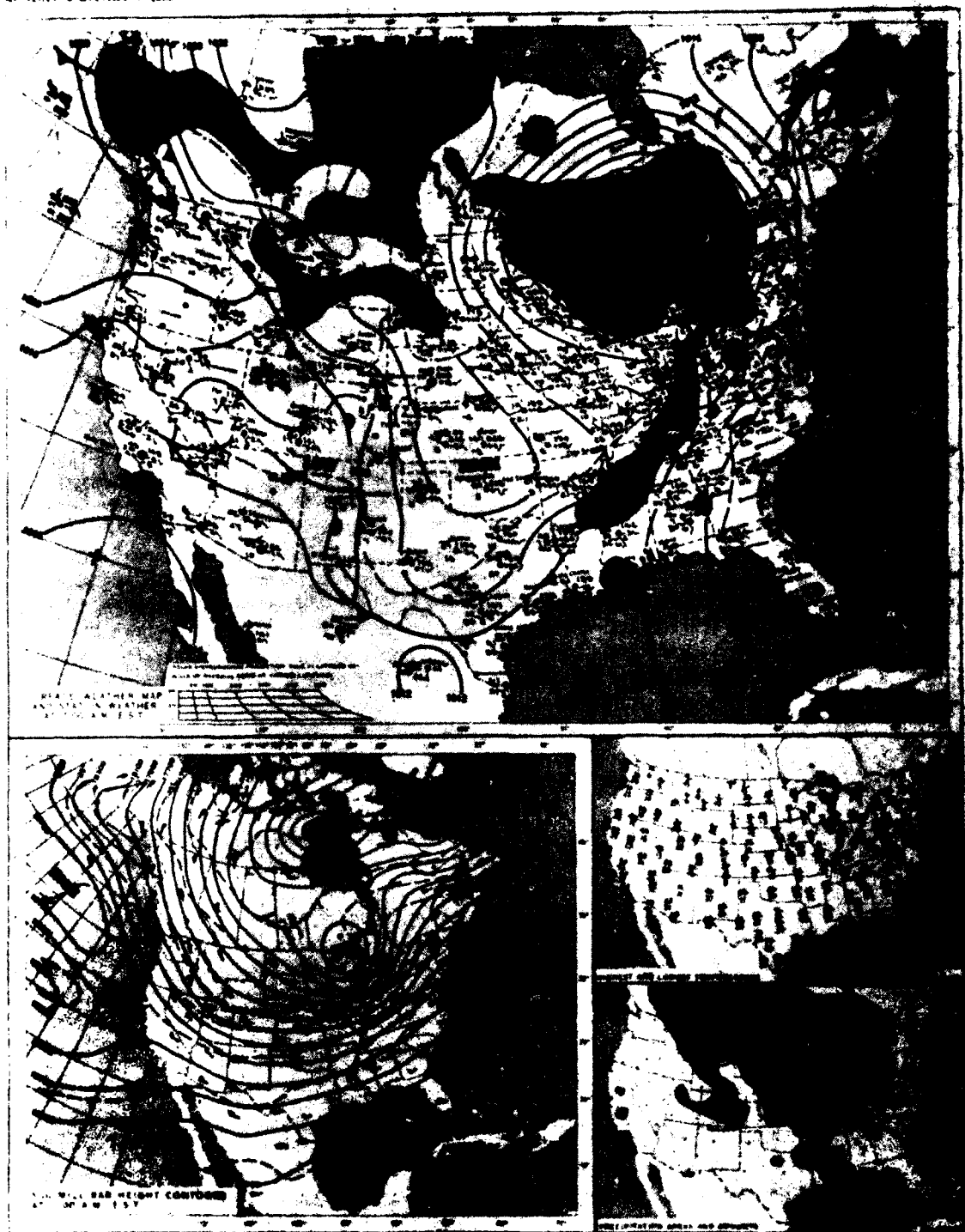


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TUESDAY, JANUARY 8, 1968

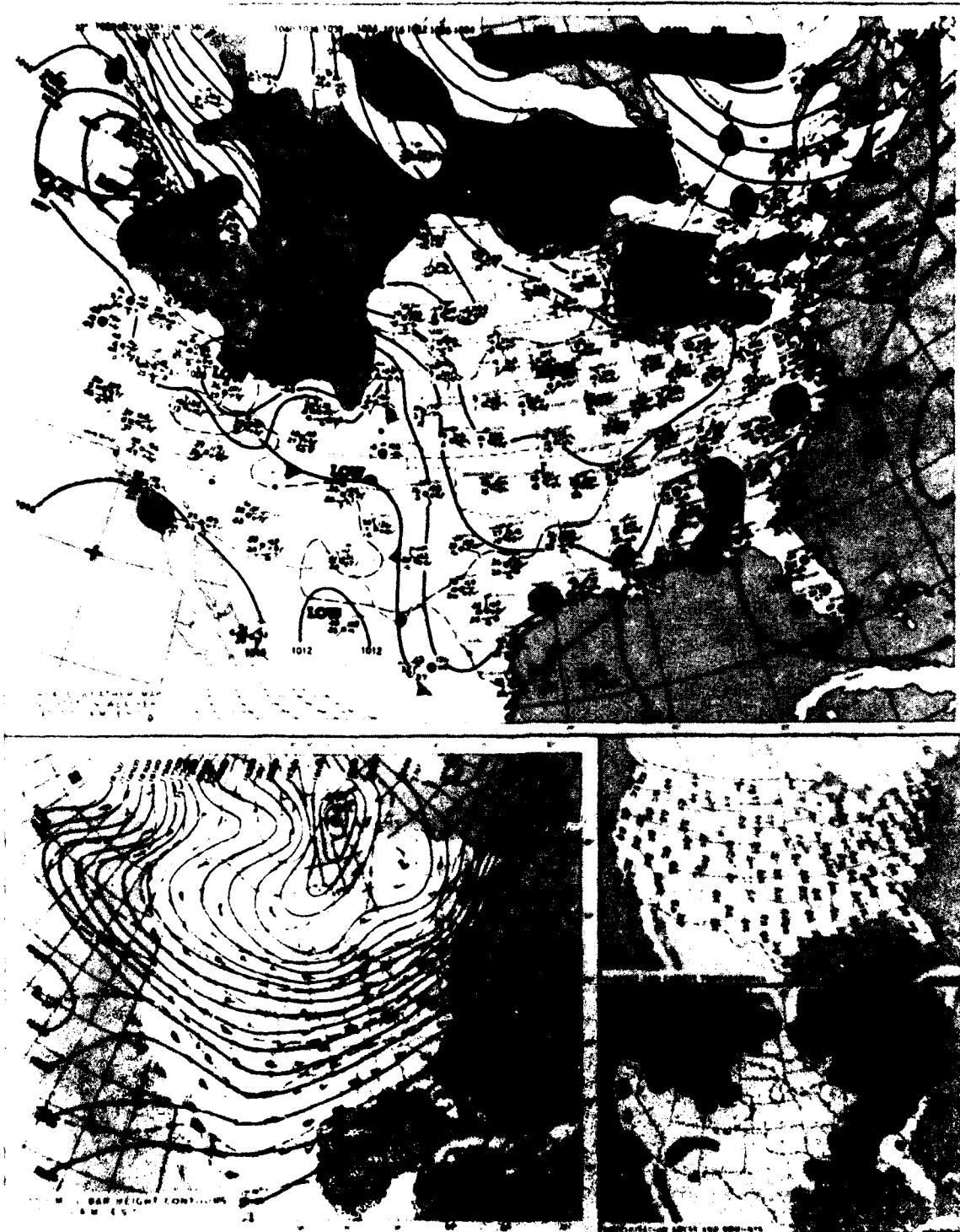


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WEDNESDAY JANUARY 9, 1968

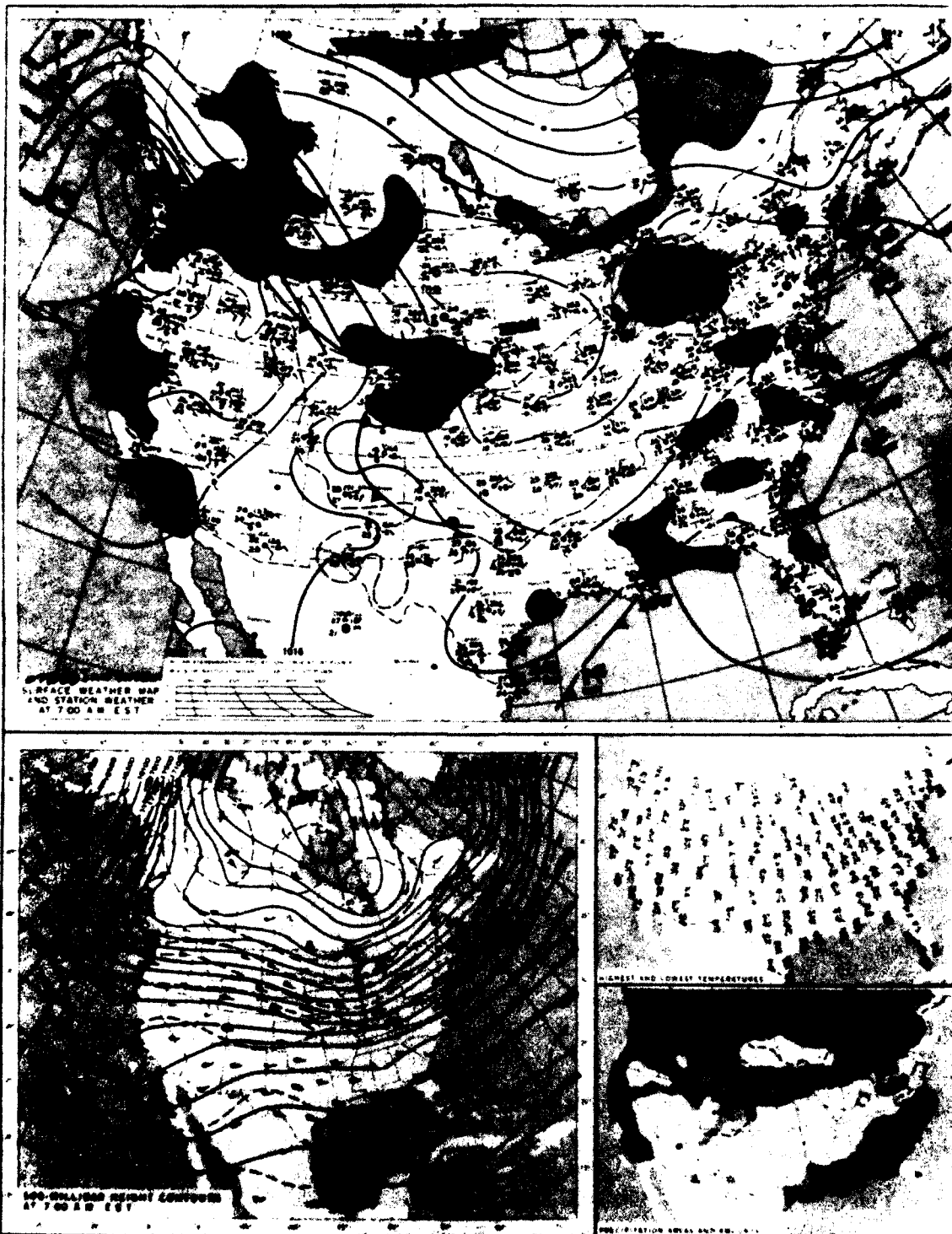


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THURSDAY, JANUARY 19, 1960

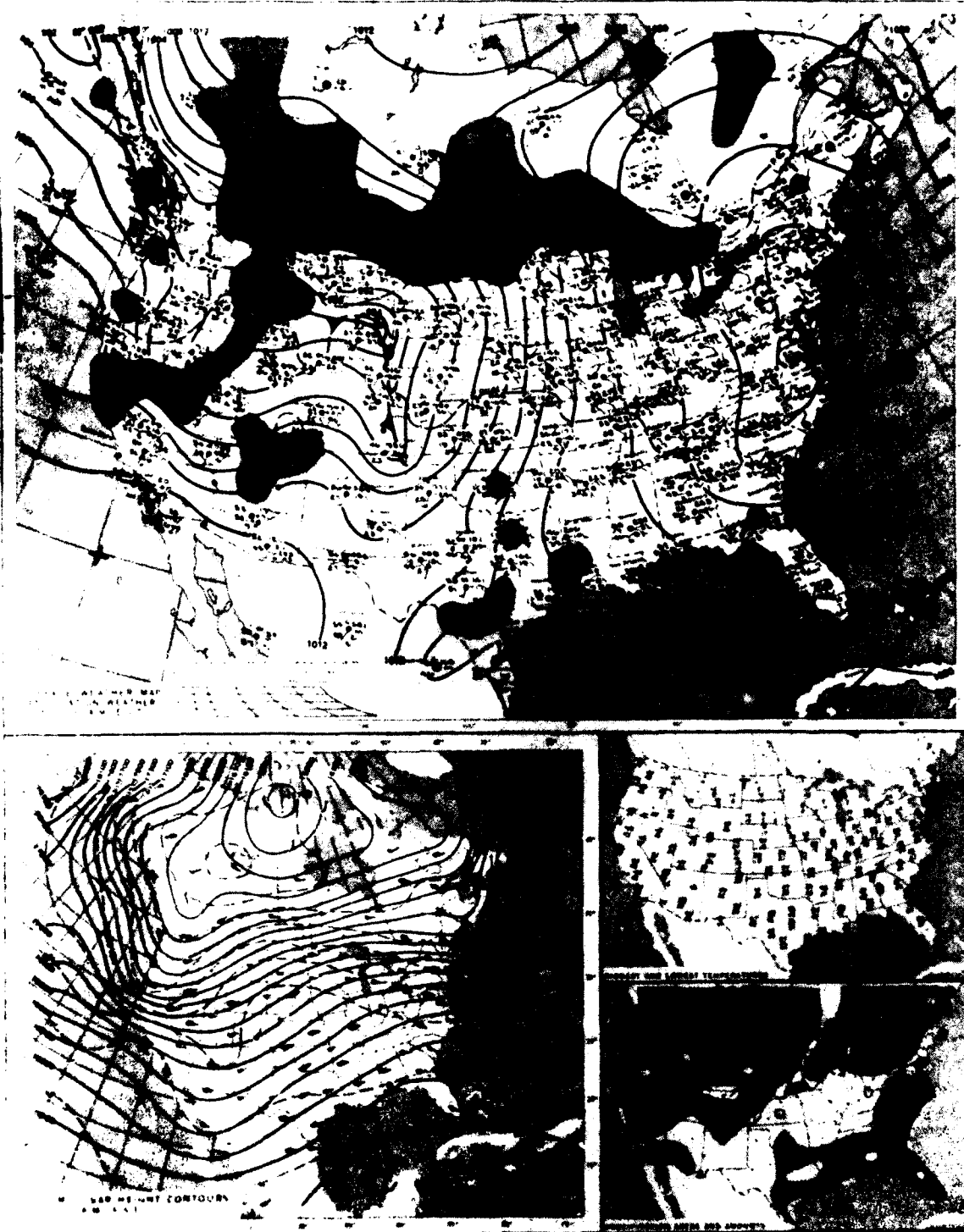


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FRIDAY JANUARY 11 1960

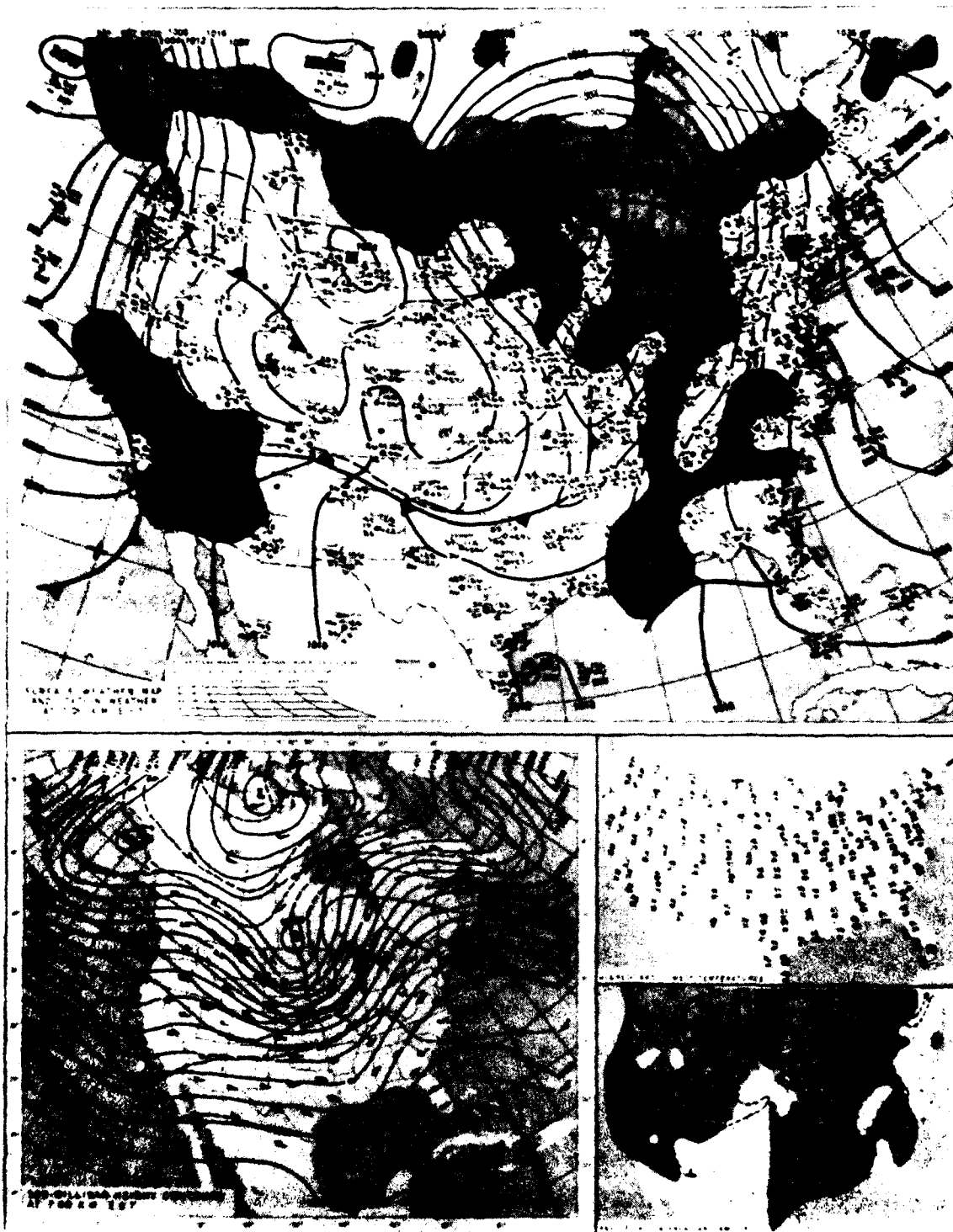


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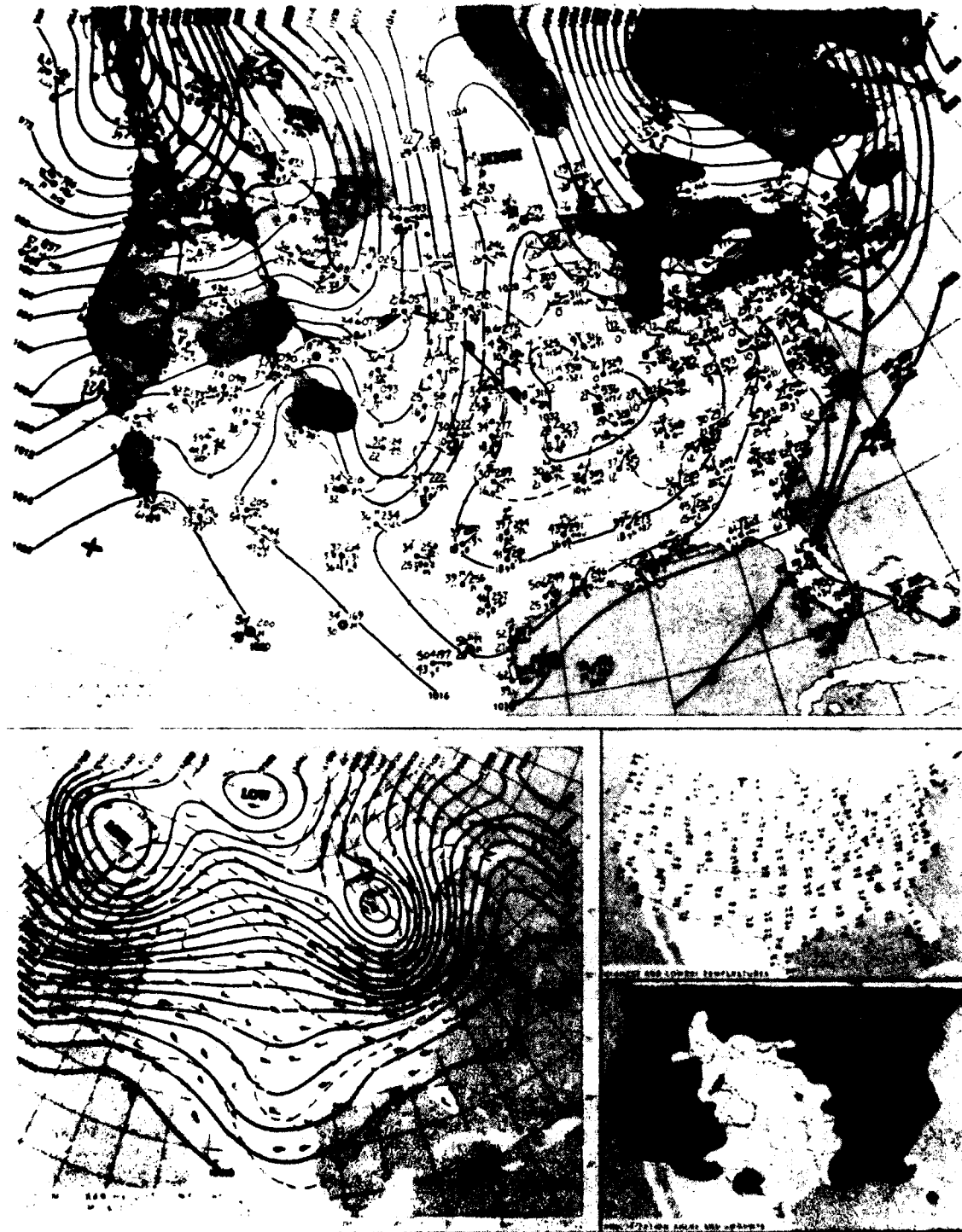


Figure 534.

SUNDAY, JANUARY 13, 1968



Figure 535.

MONDAY JANUARY 14, 1968

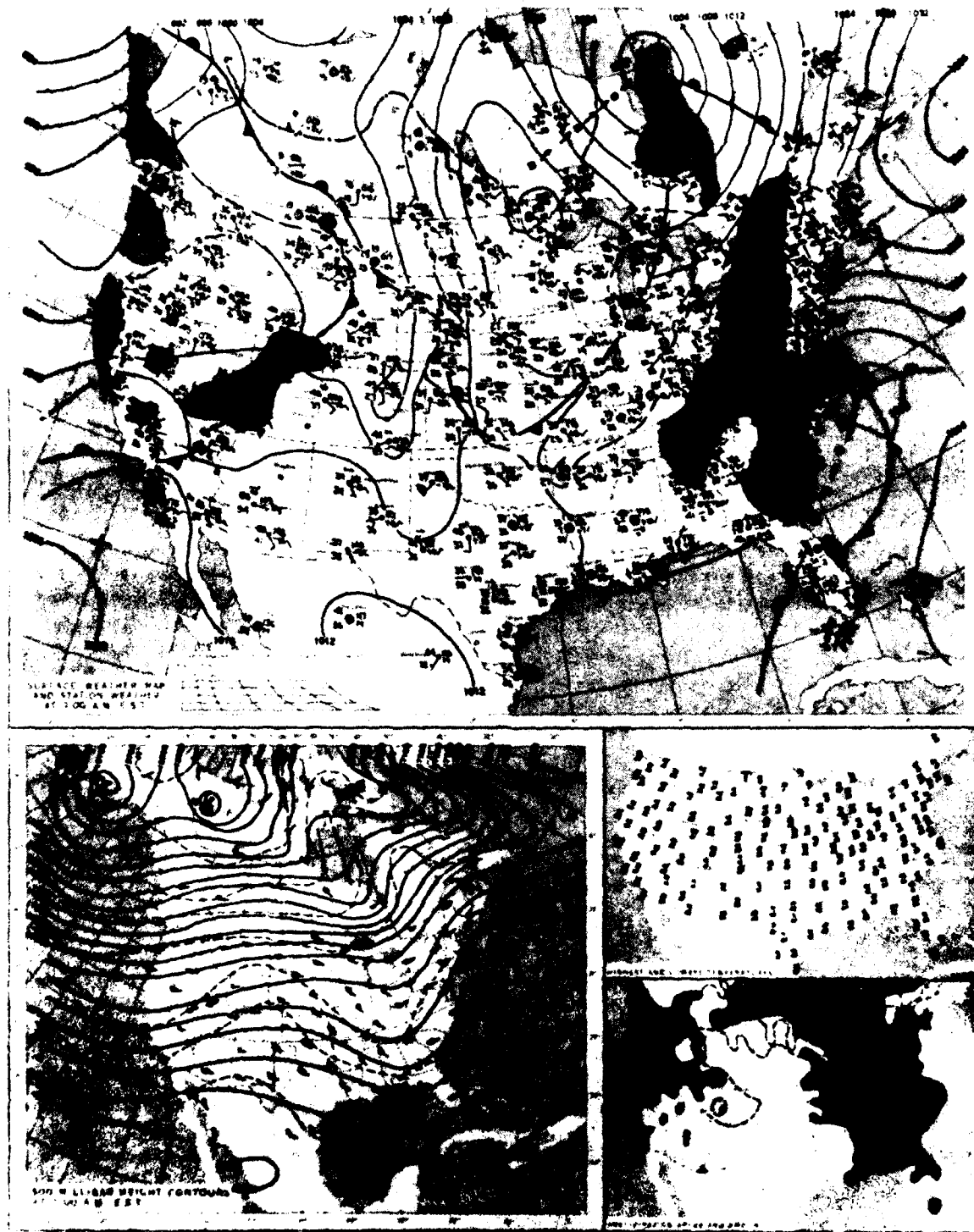


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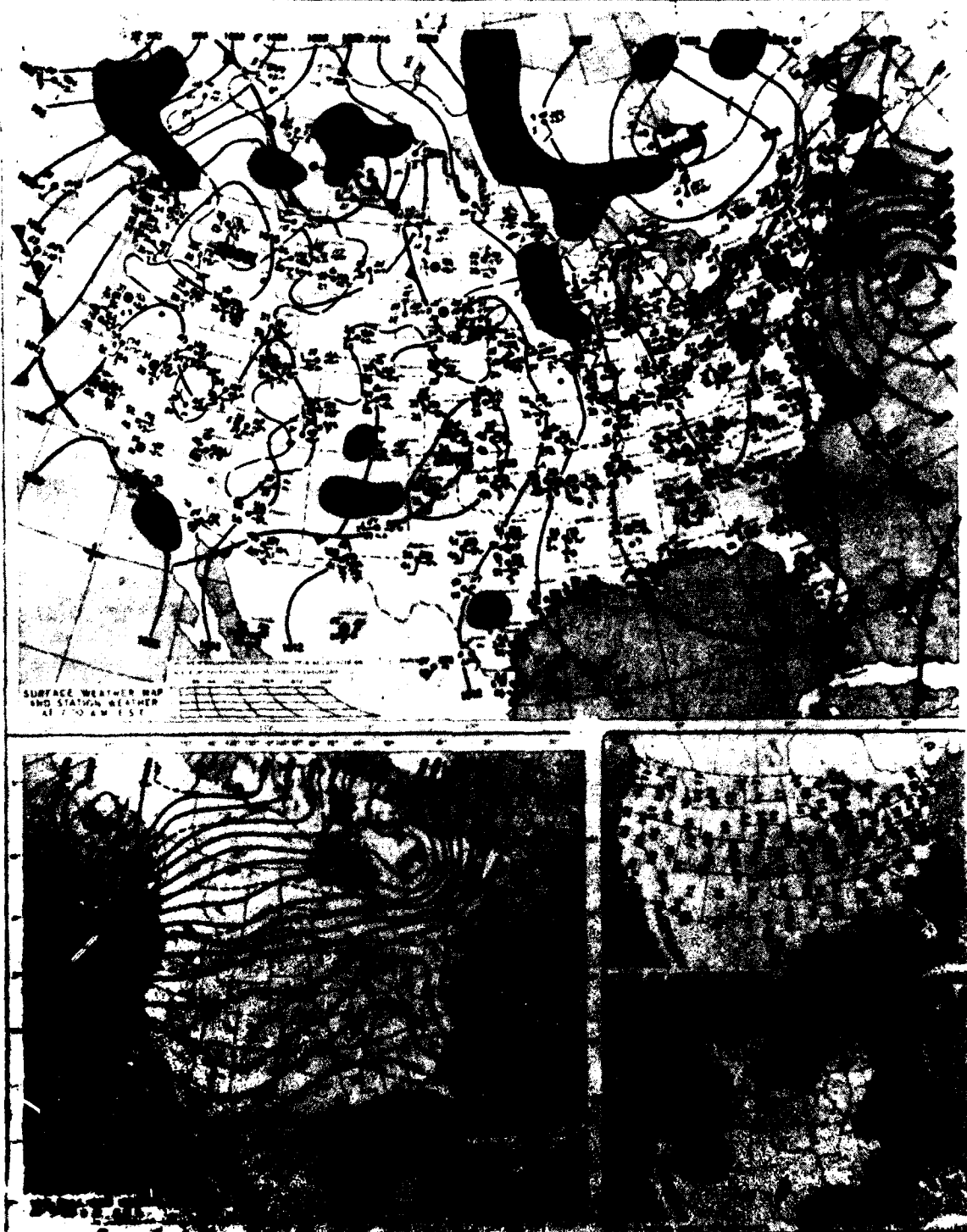


Figure 537.

WEDNESDAY, JANUARY 26, 1950



Figure 538.

THURSDAY, JANUARY 11, 1968



Figure 539.

FRIDAY, JANUARY 18, 1963

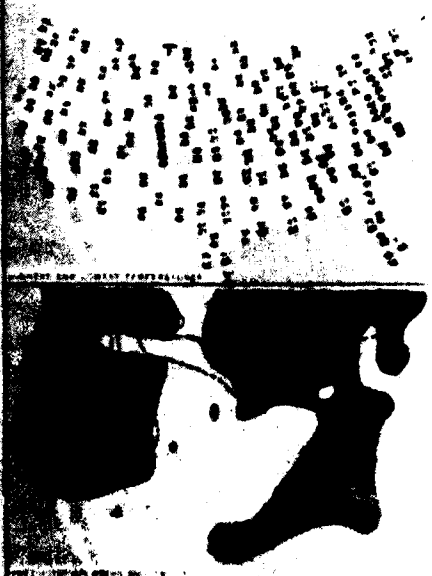


Figure 540.

SATURDAY, JANUARY 19, 1968



Figure 541.

SUNDAY JANUARY 20 1968



Figure 542.

MONDAY, JANUARY 21, 1968

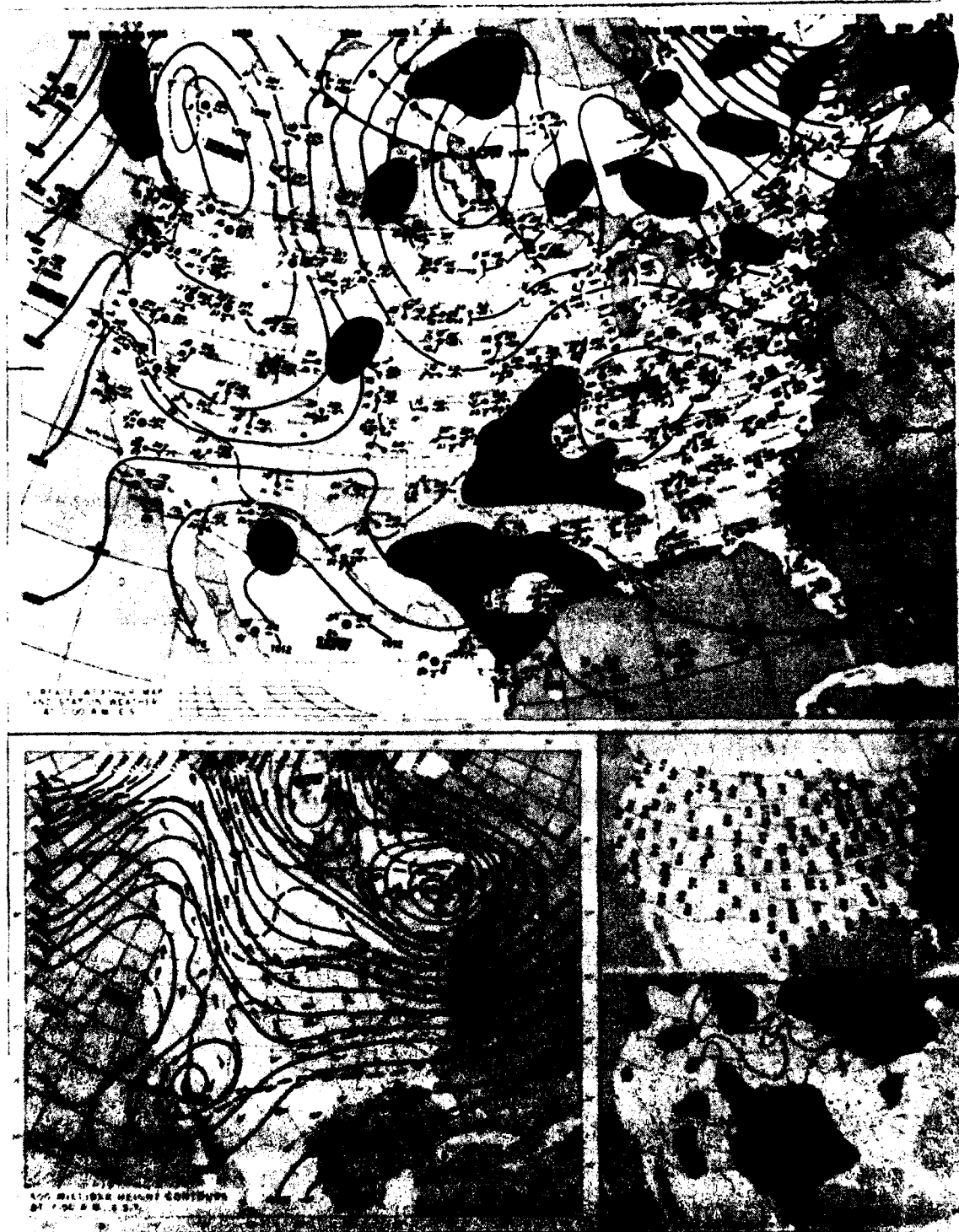


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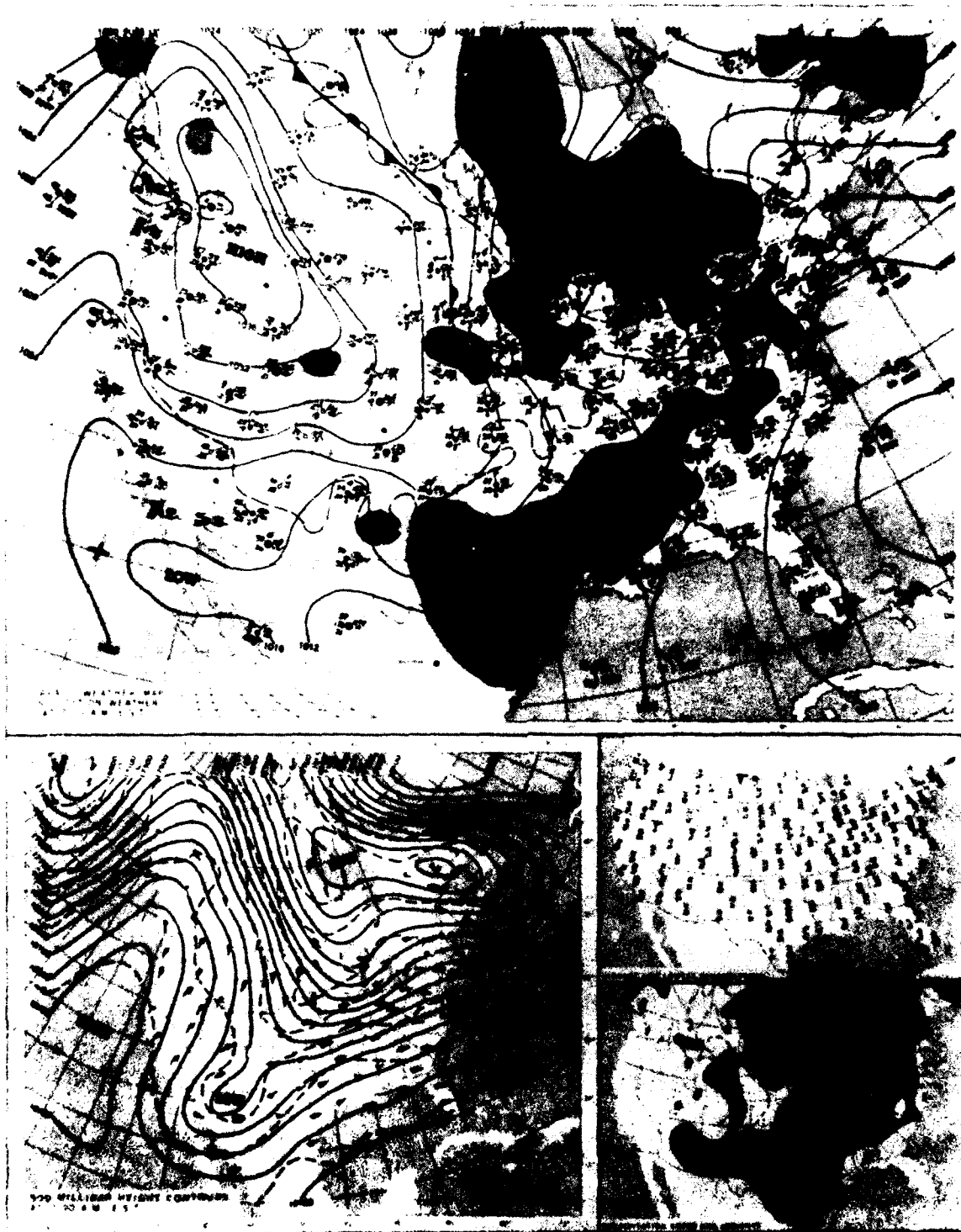


Figure 544.

WEDNESDAY, JANUARY 26, 1950



Figure 545.

THURSDAY, JANUARY 24, 1967

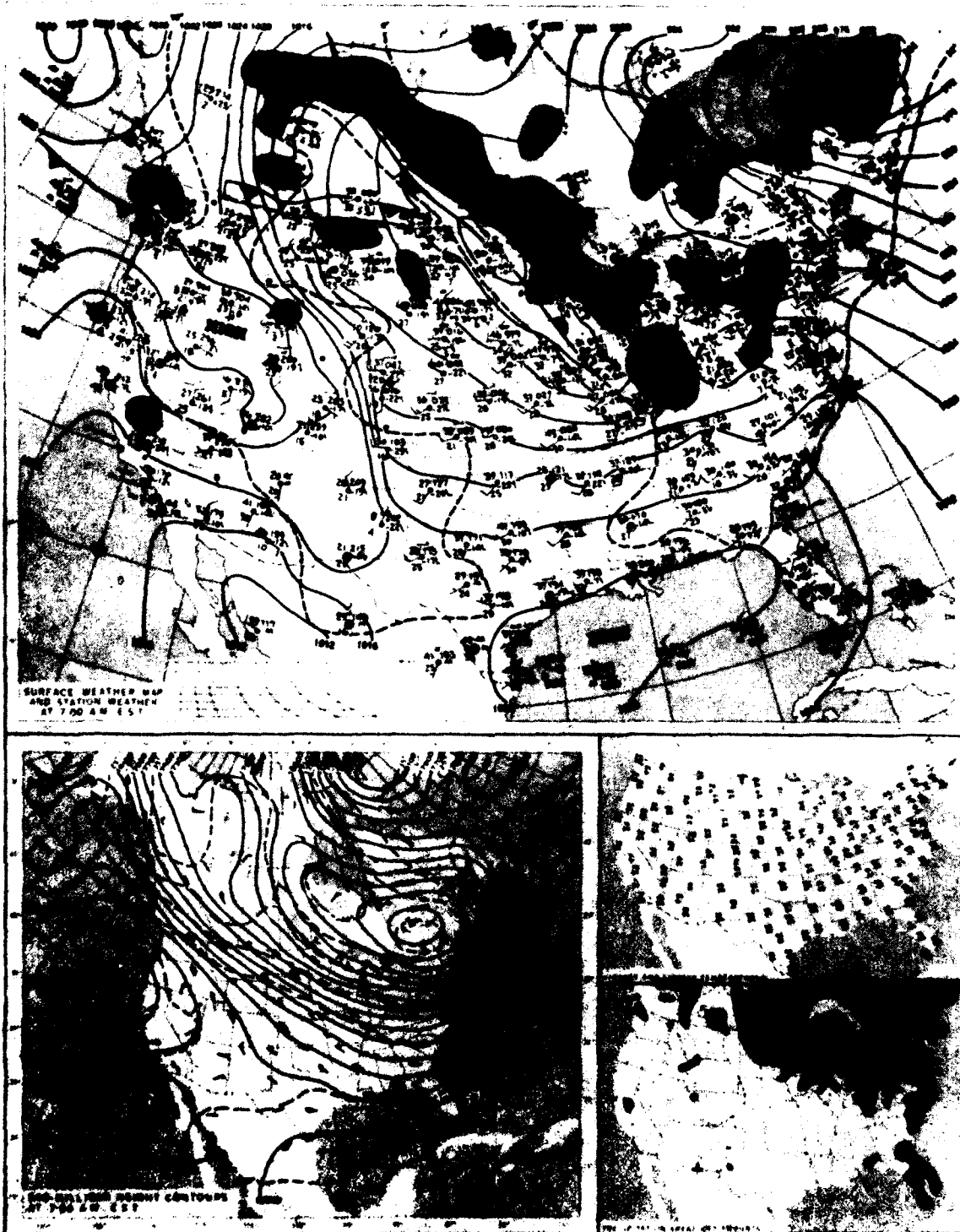


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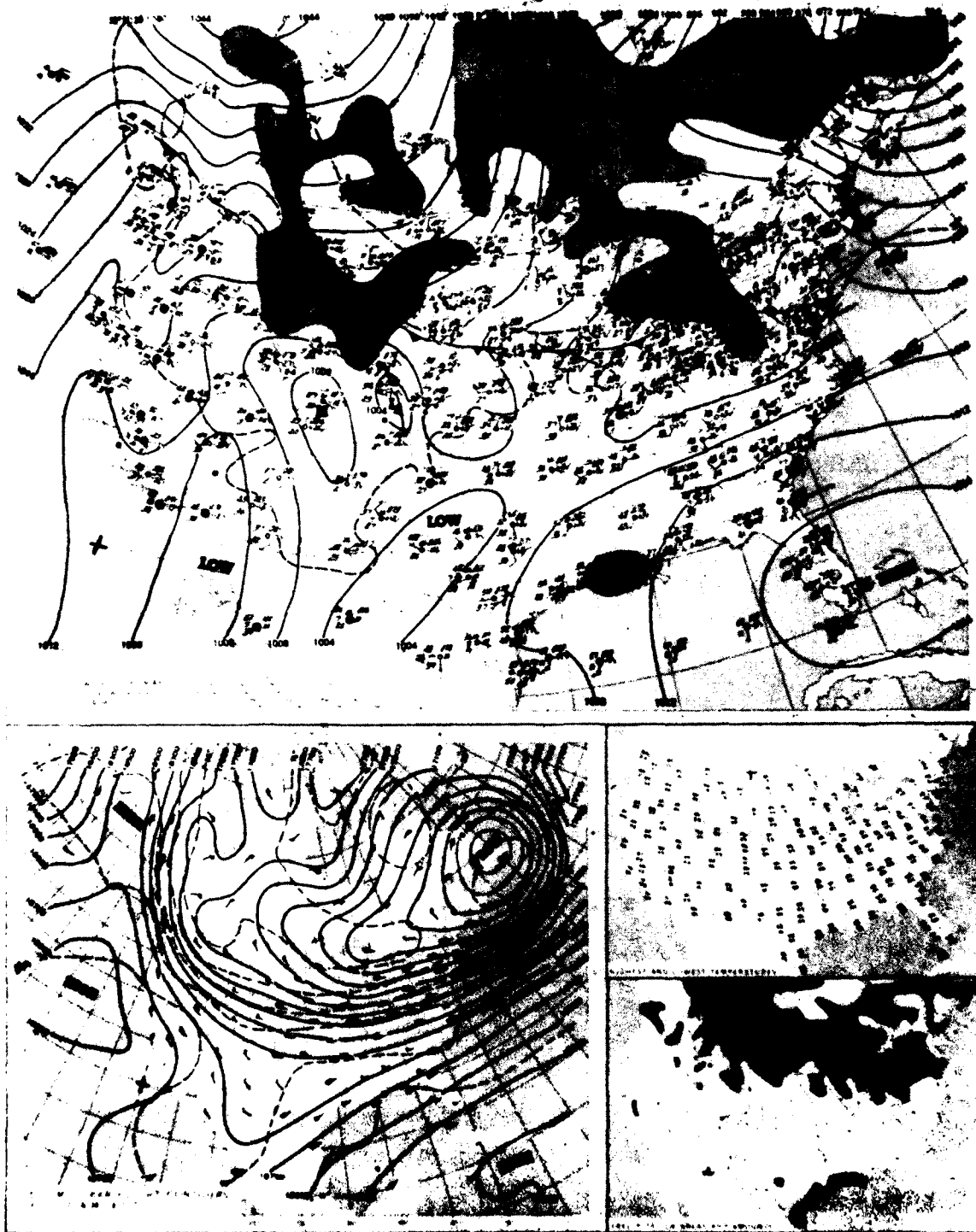


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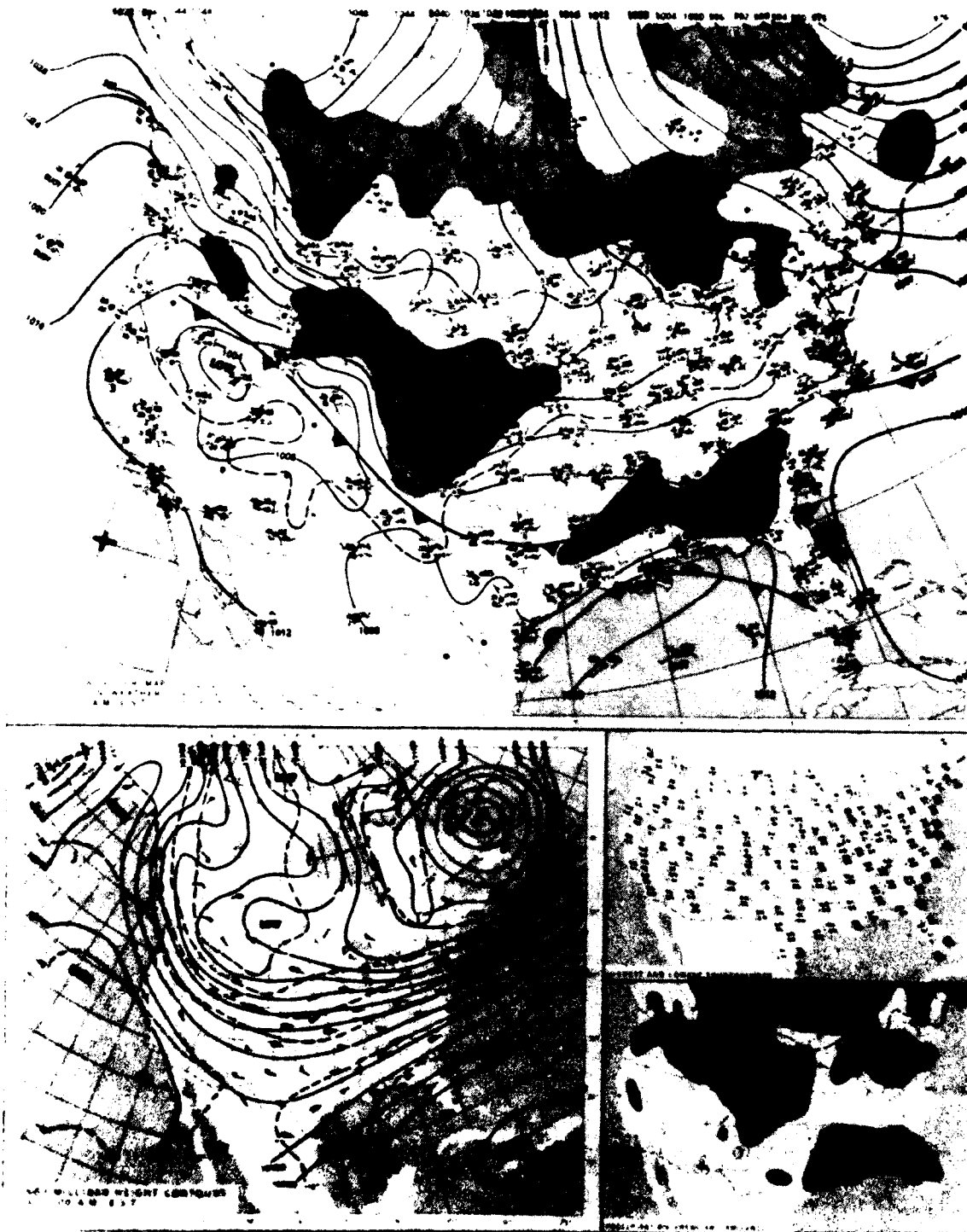


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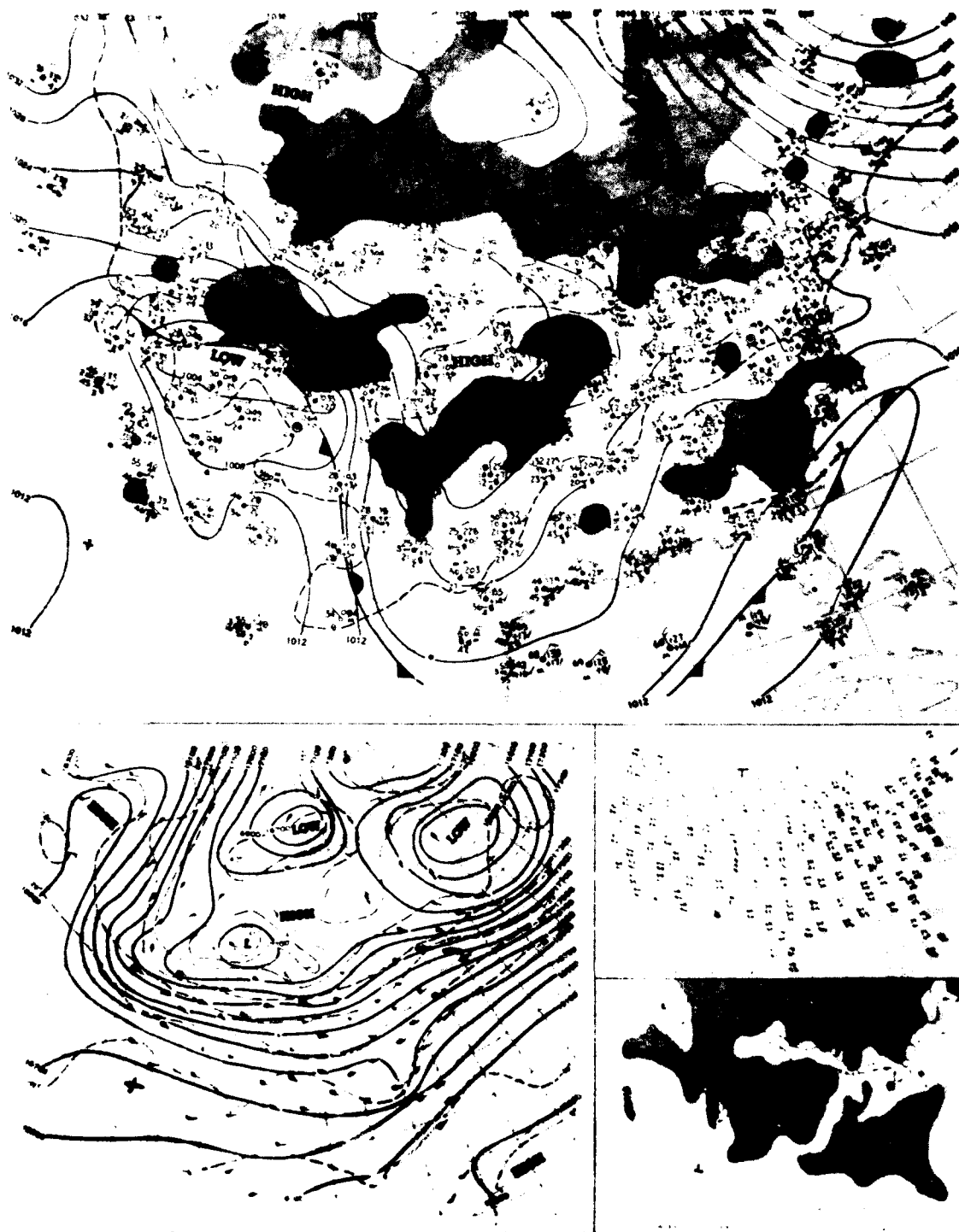


Figure 549.

6.0 ACOUSTIC TRACKING DATA (Figures 551-553)

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A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M T BERGIN
UNCLASSIFIED NORDA-TN-88

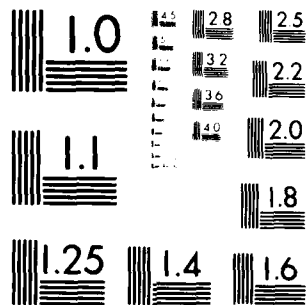
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A COMPREHENSIVE GRAPHICAL REPRESENTATION OF DATA OBTAINED IN TH--ETC
OCT 80 K D SAUNDERS, A W GREEN, M T BERGIN
NORDA--TN--85

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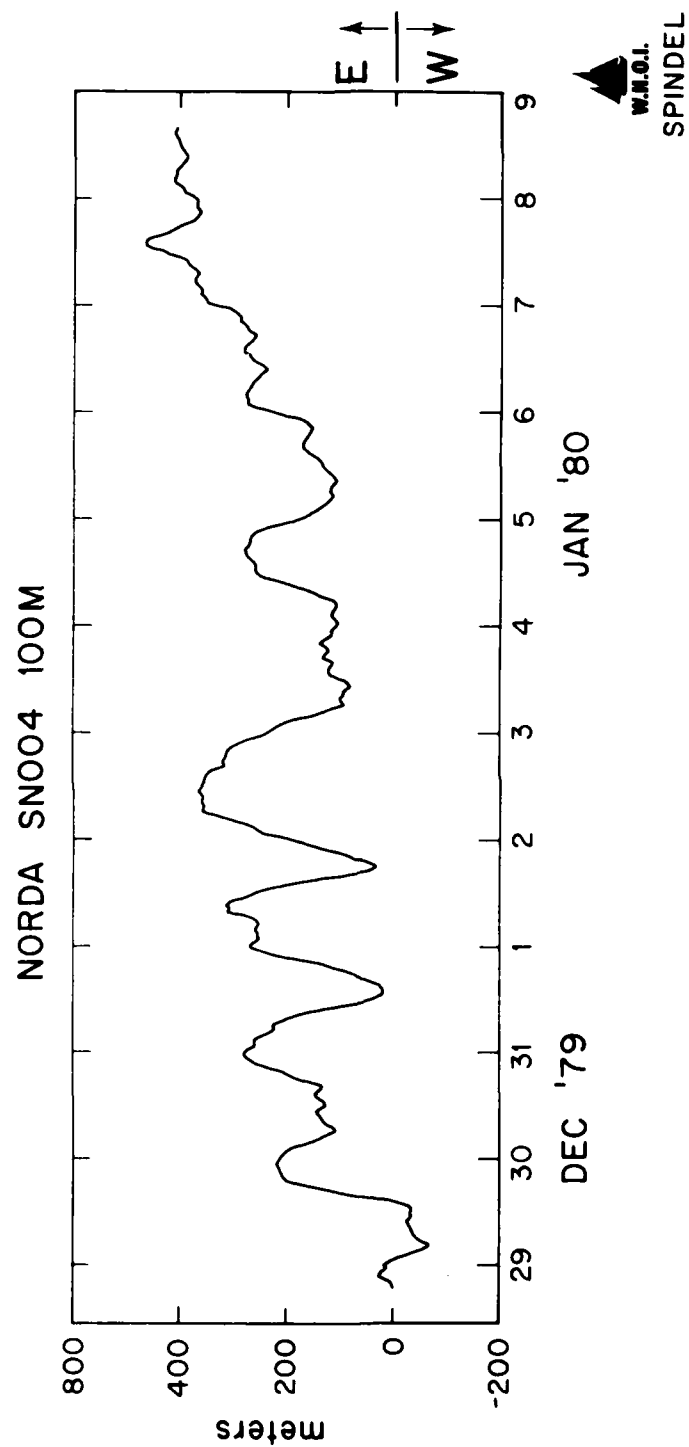


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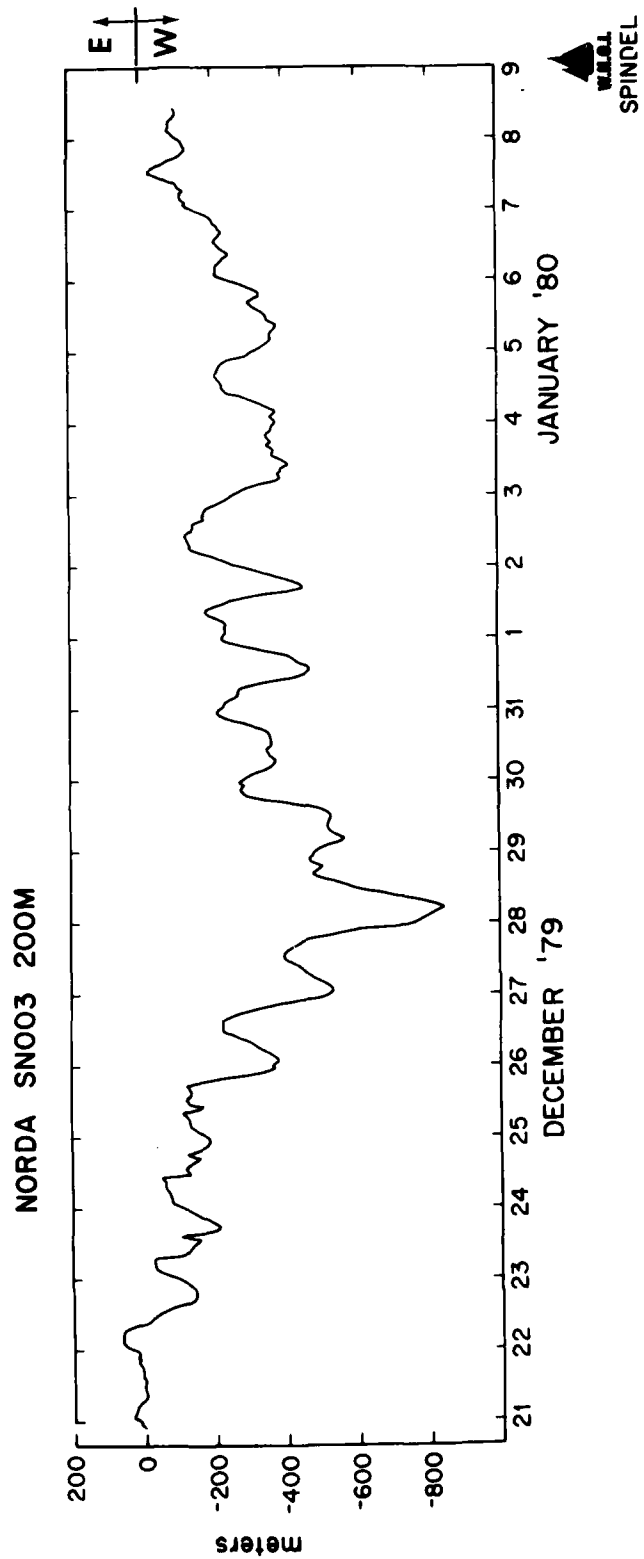


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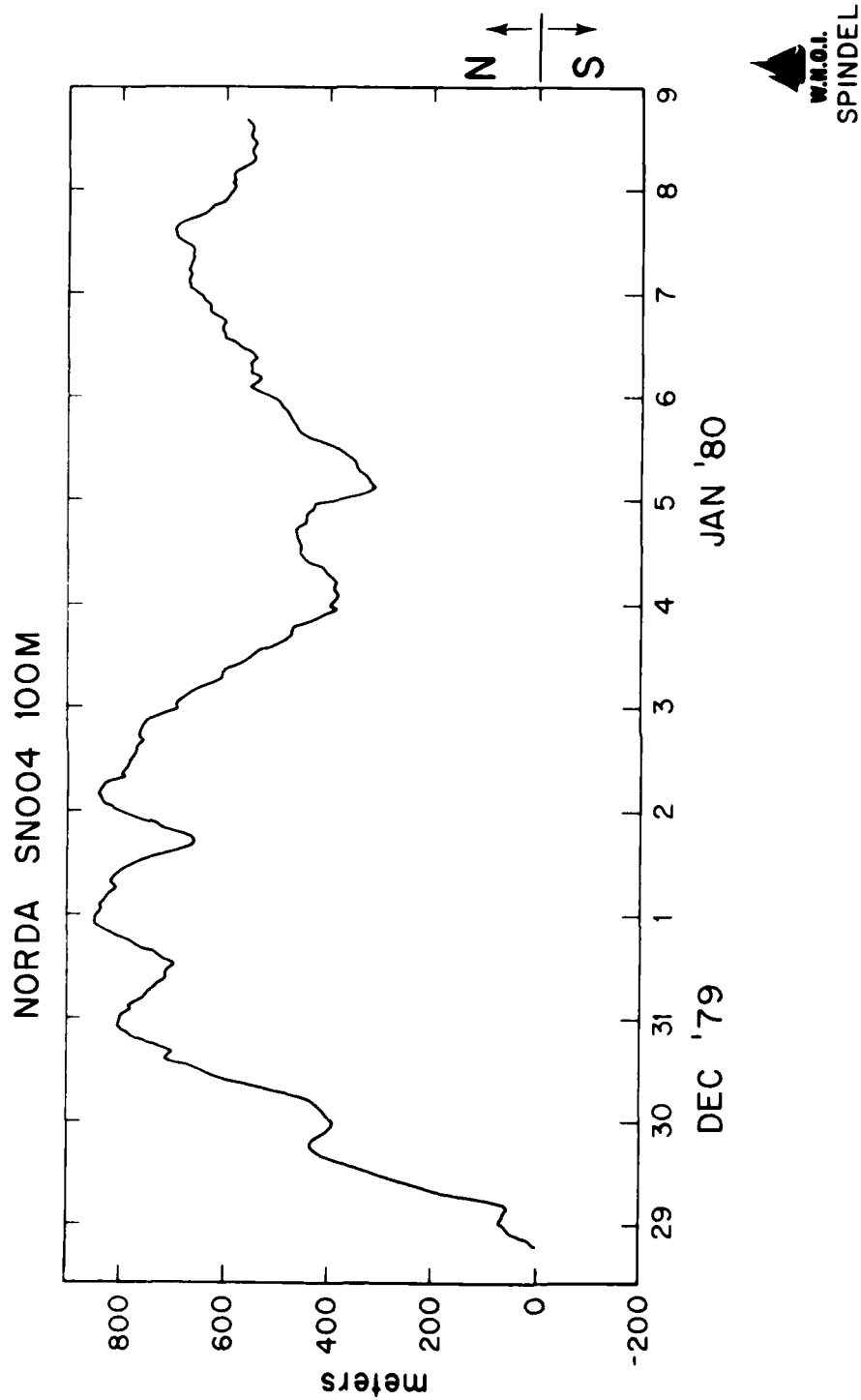


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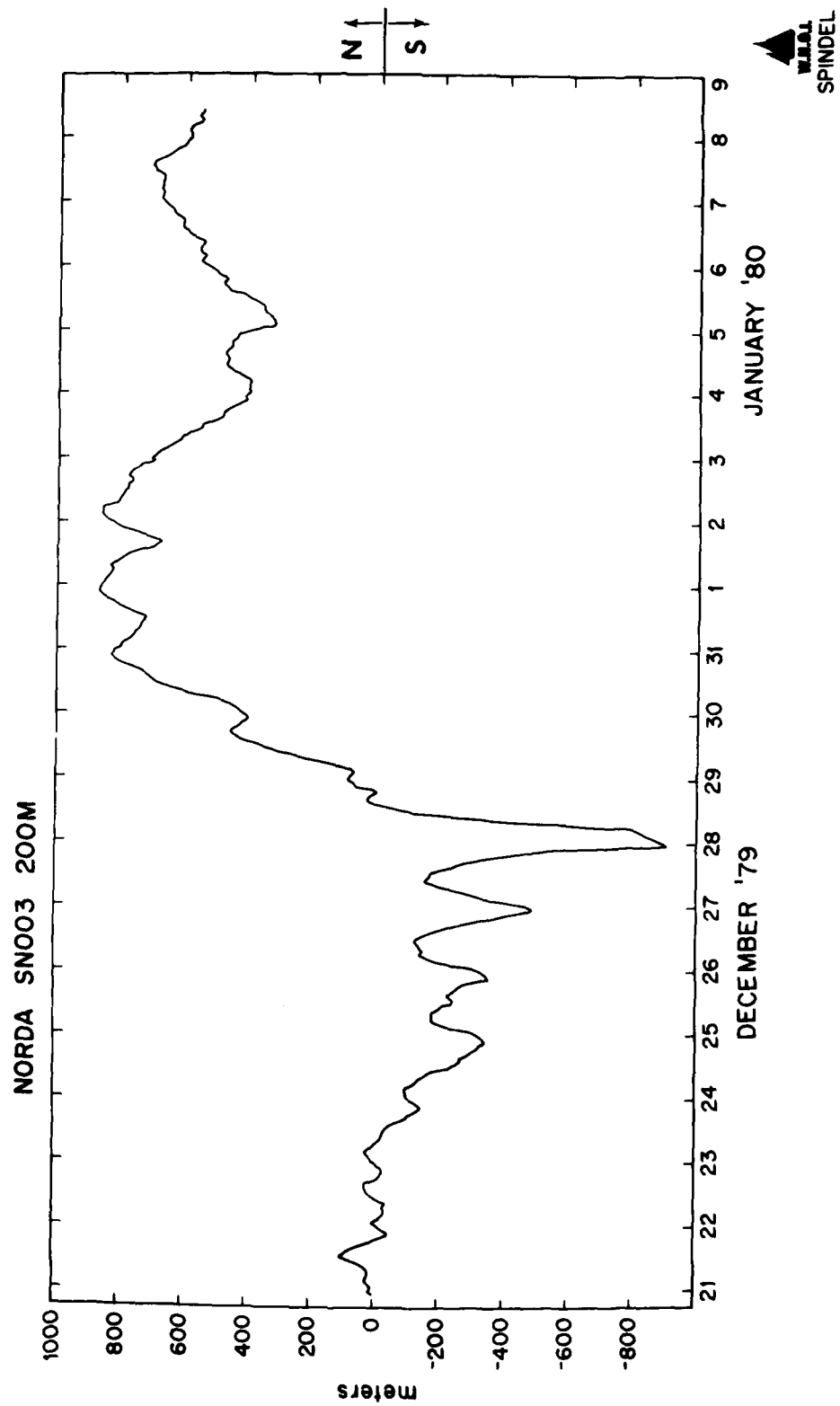


Figure 553.

7.0 Expendable Current Probe (XCP) Data (Figs. 554-598)

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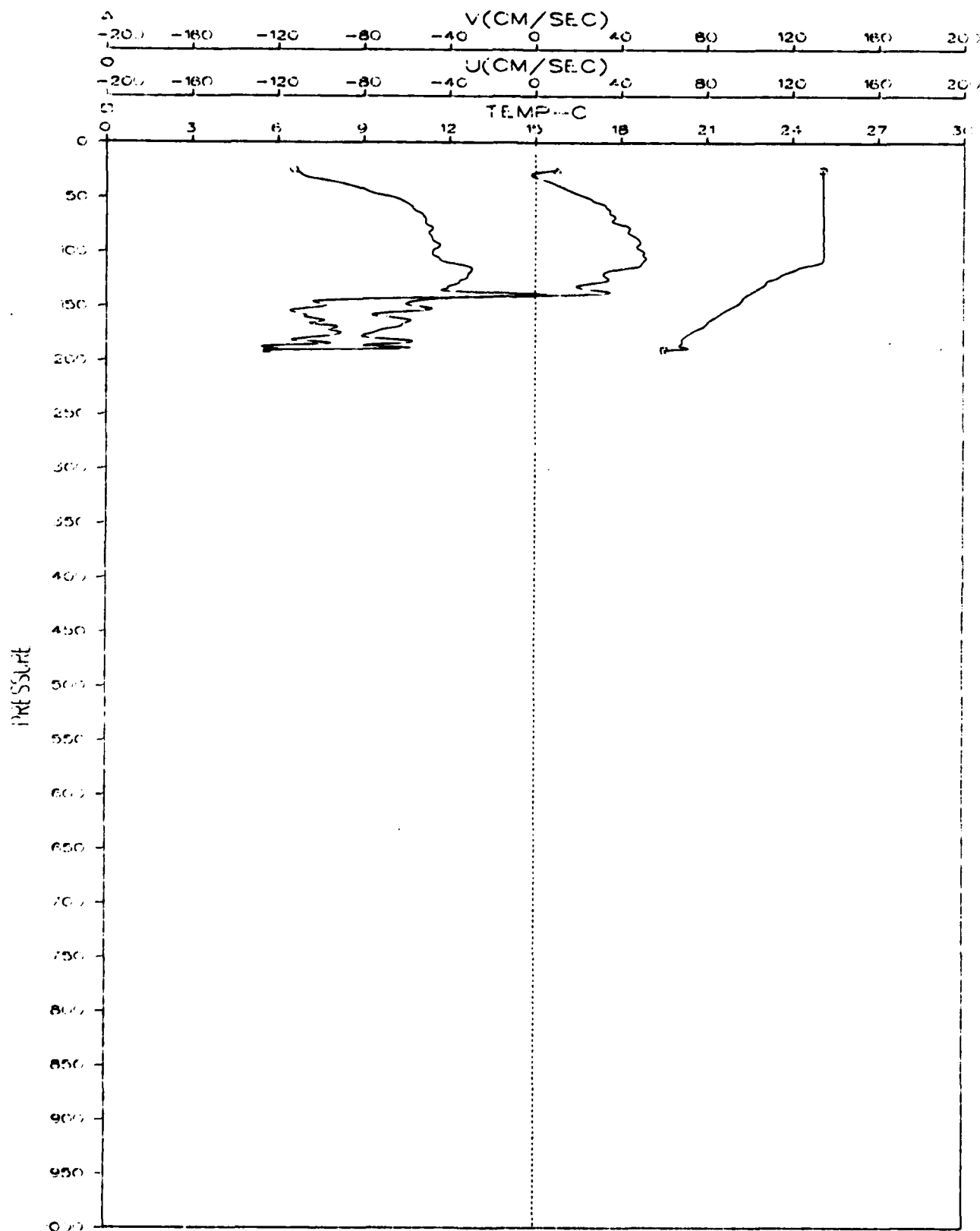


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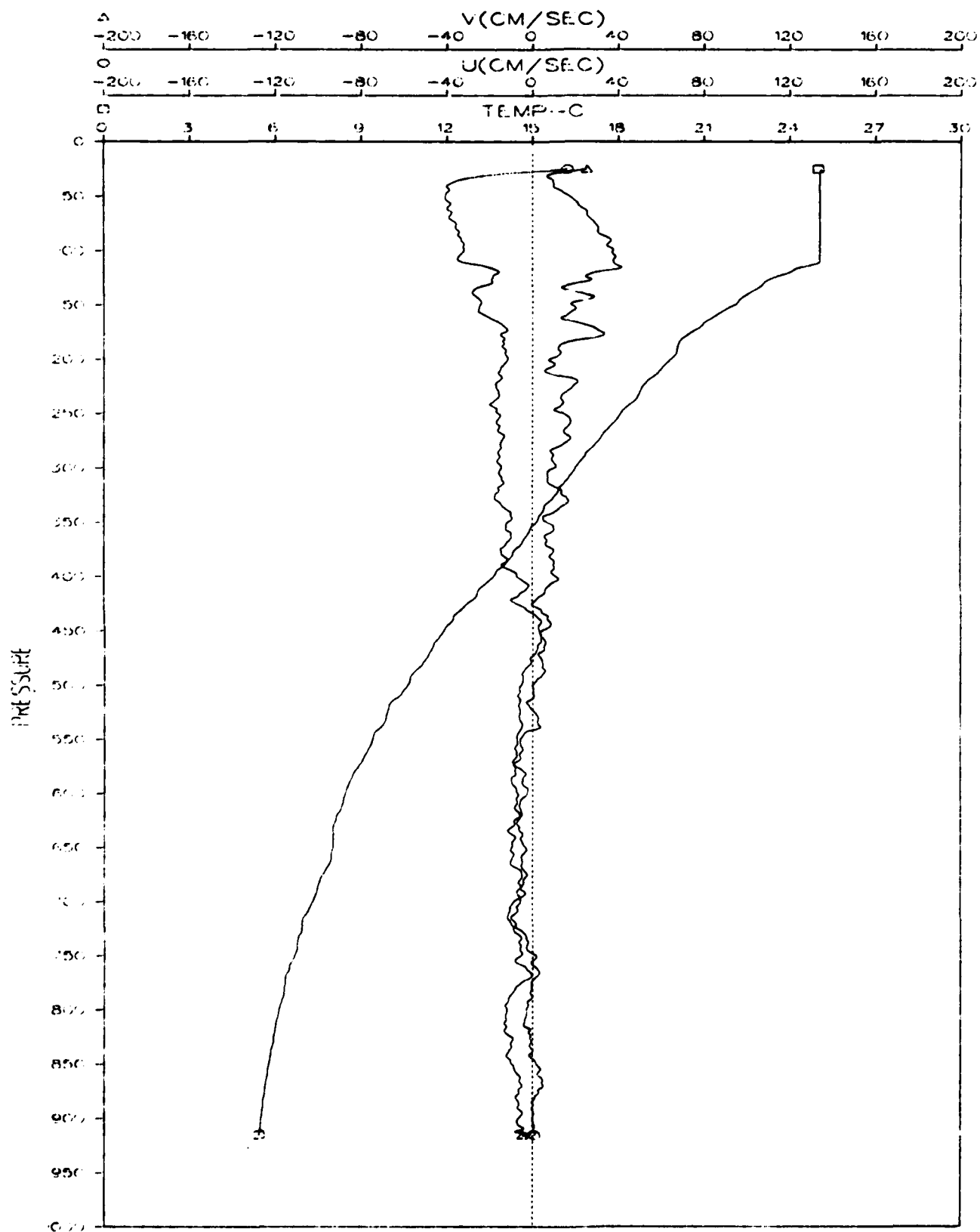


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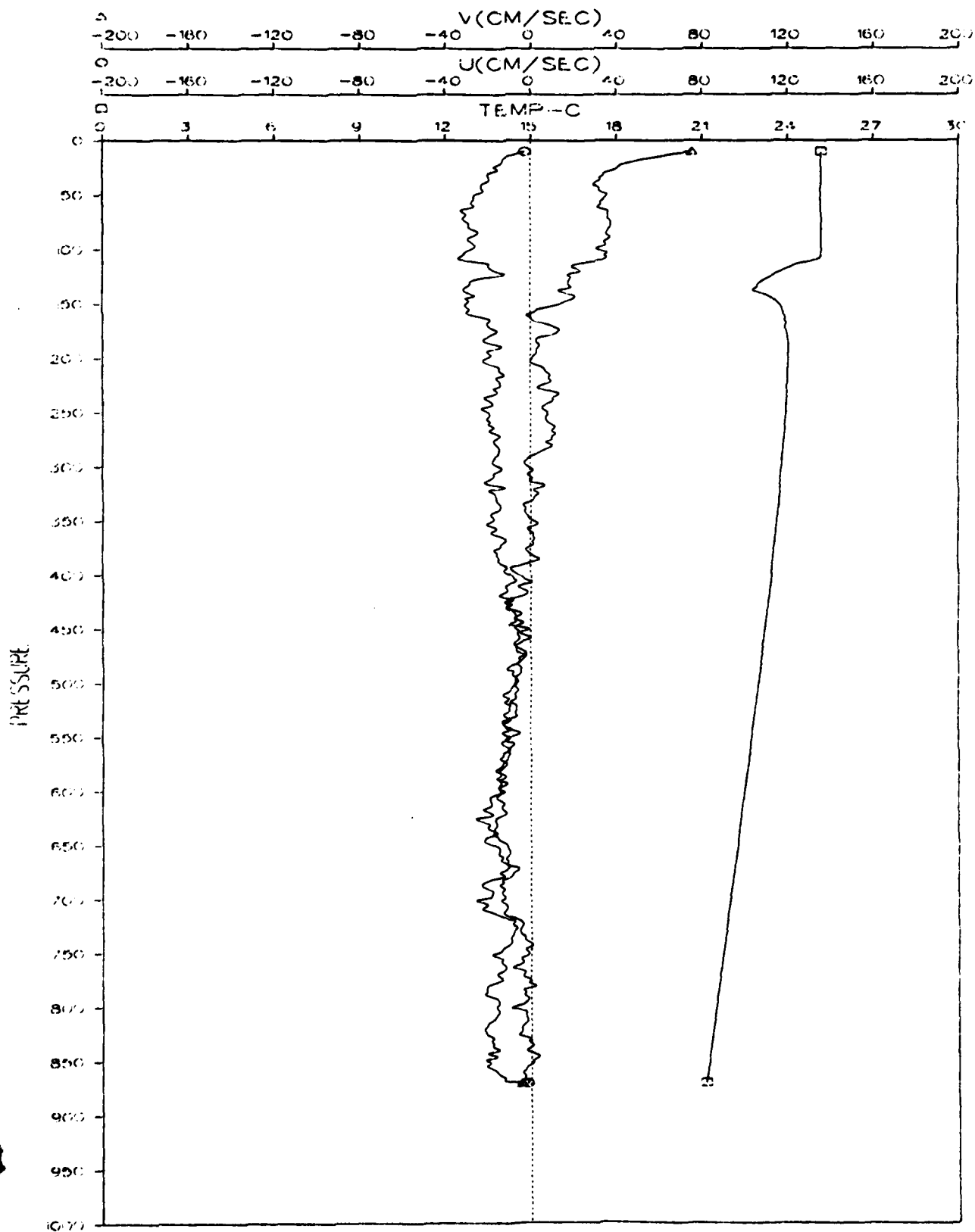


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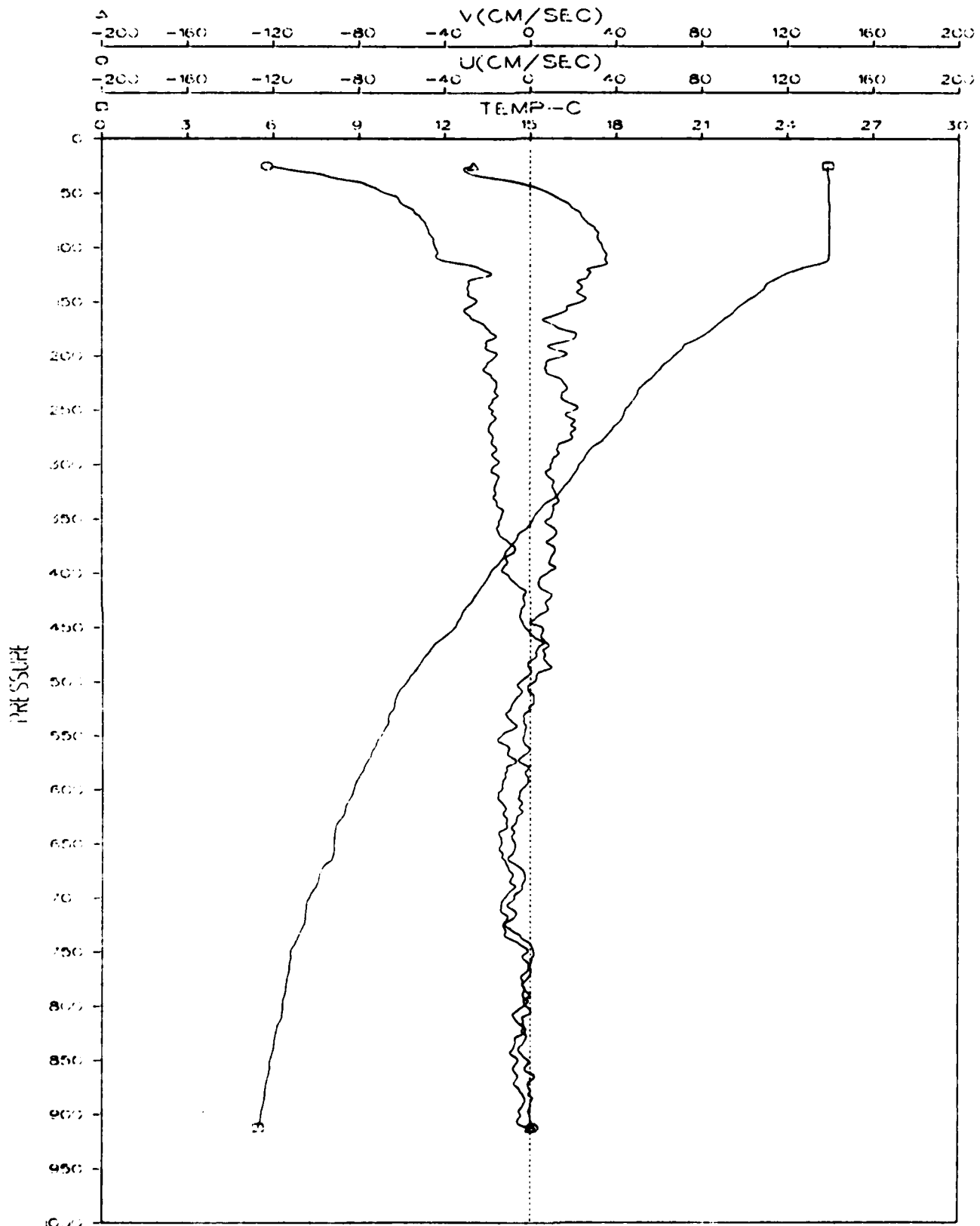


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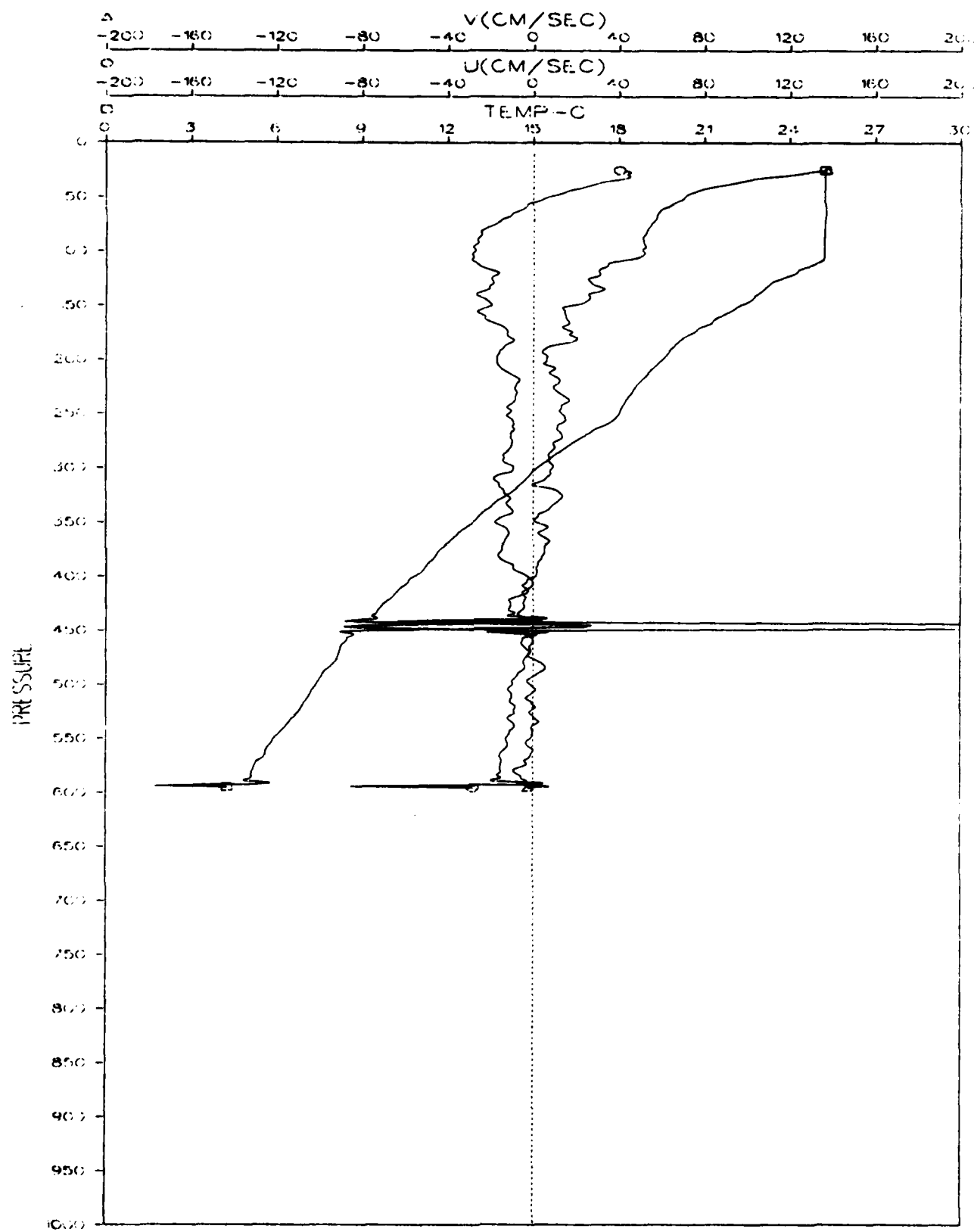


Figure 558

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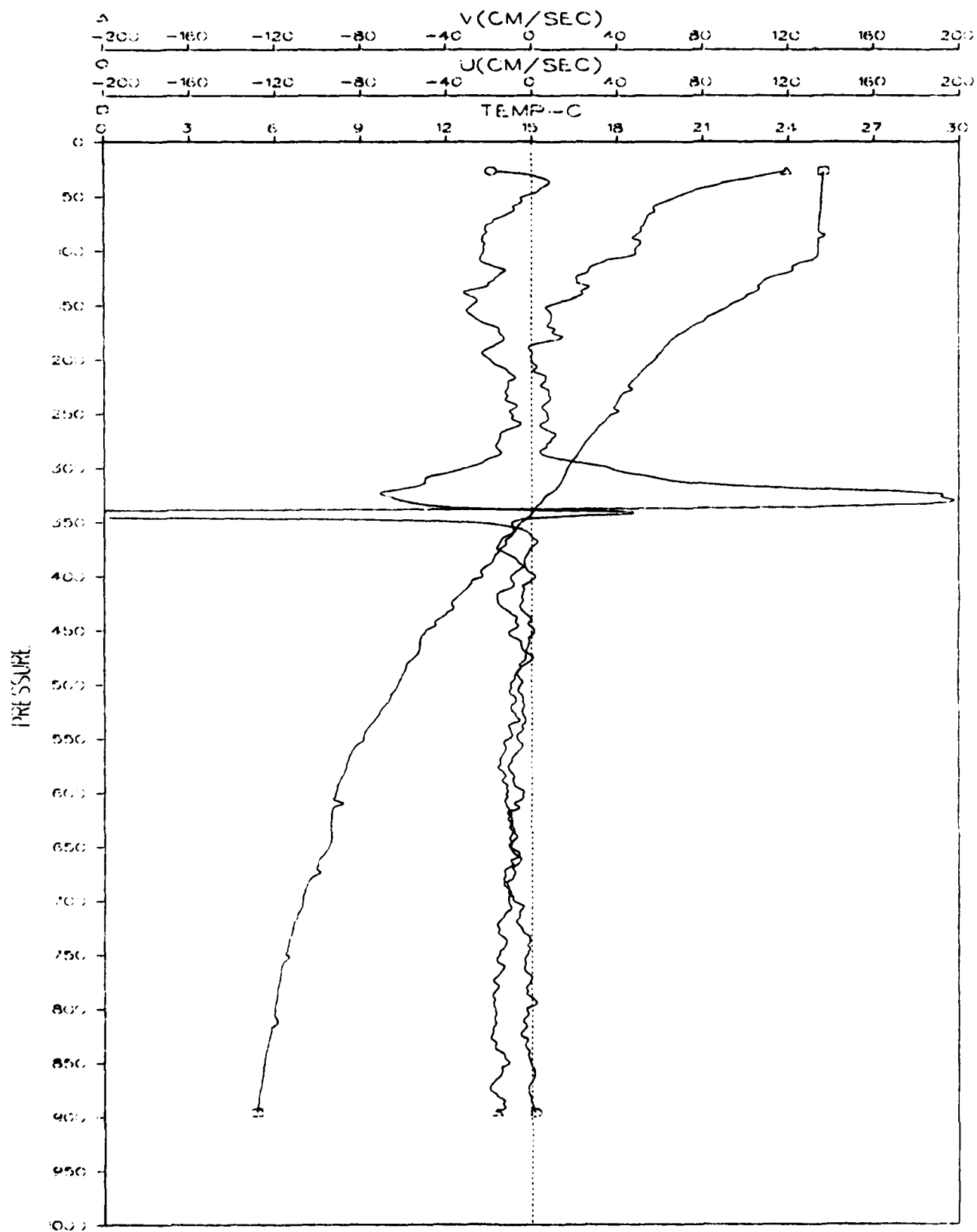


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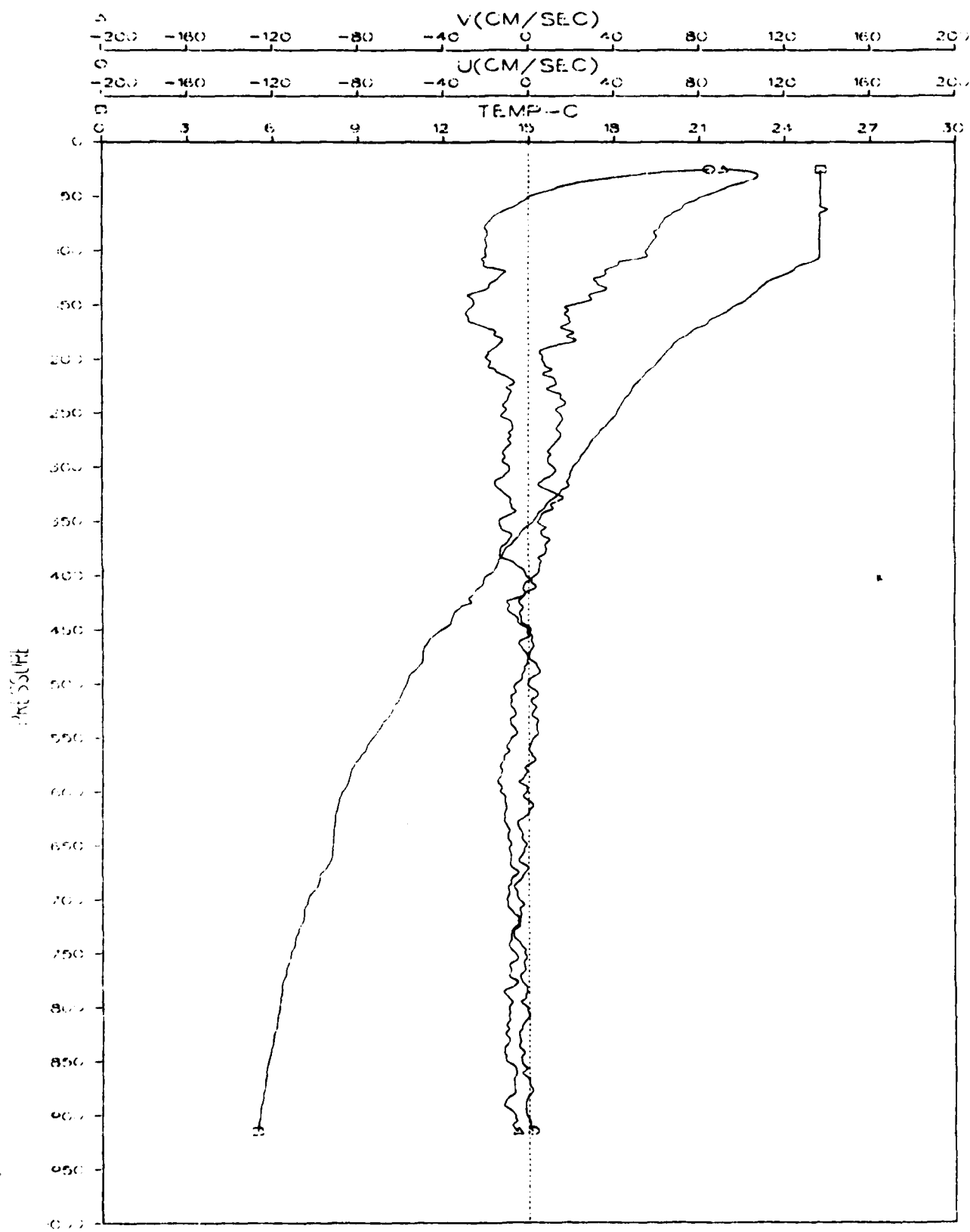


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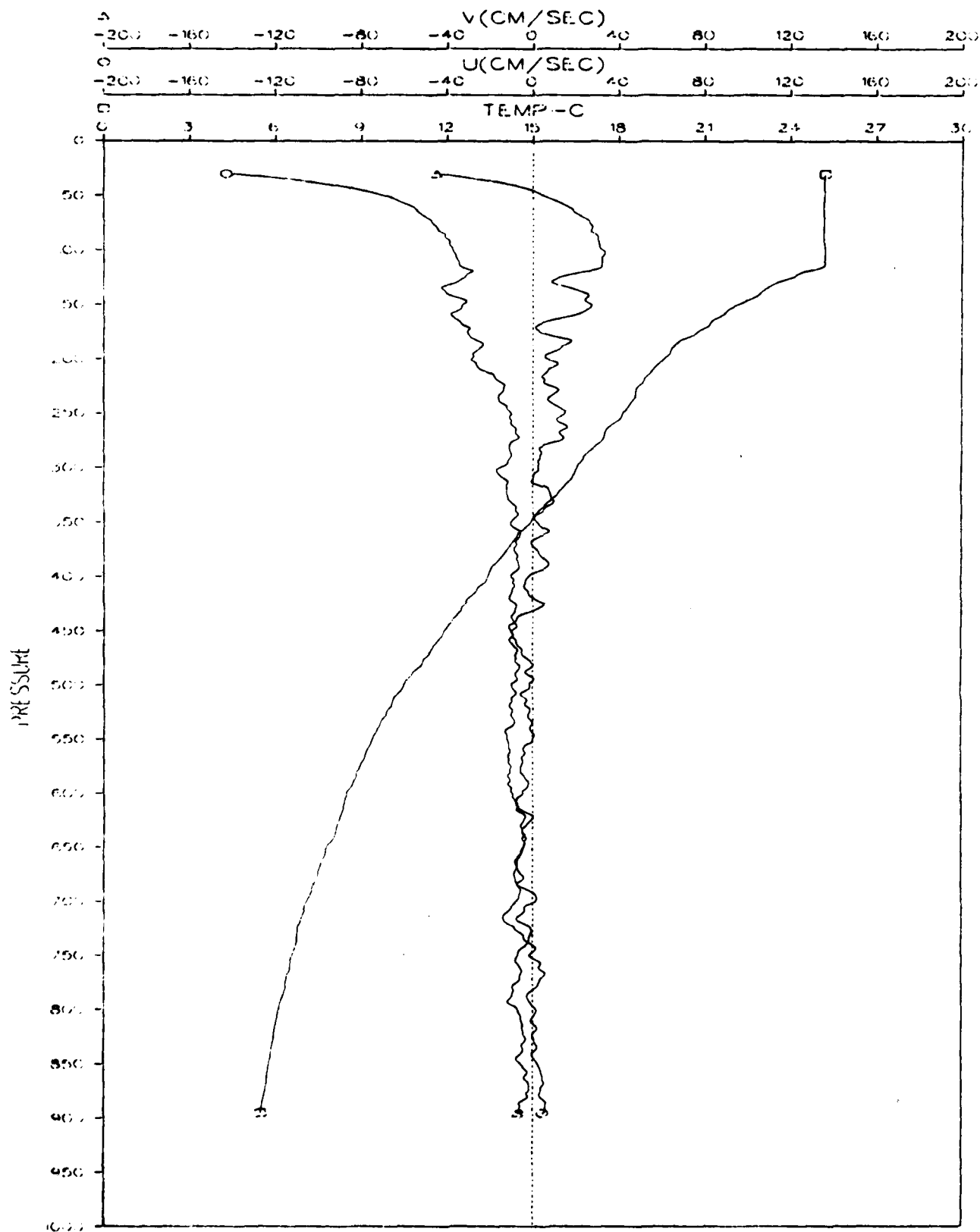


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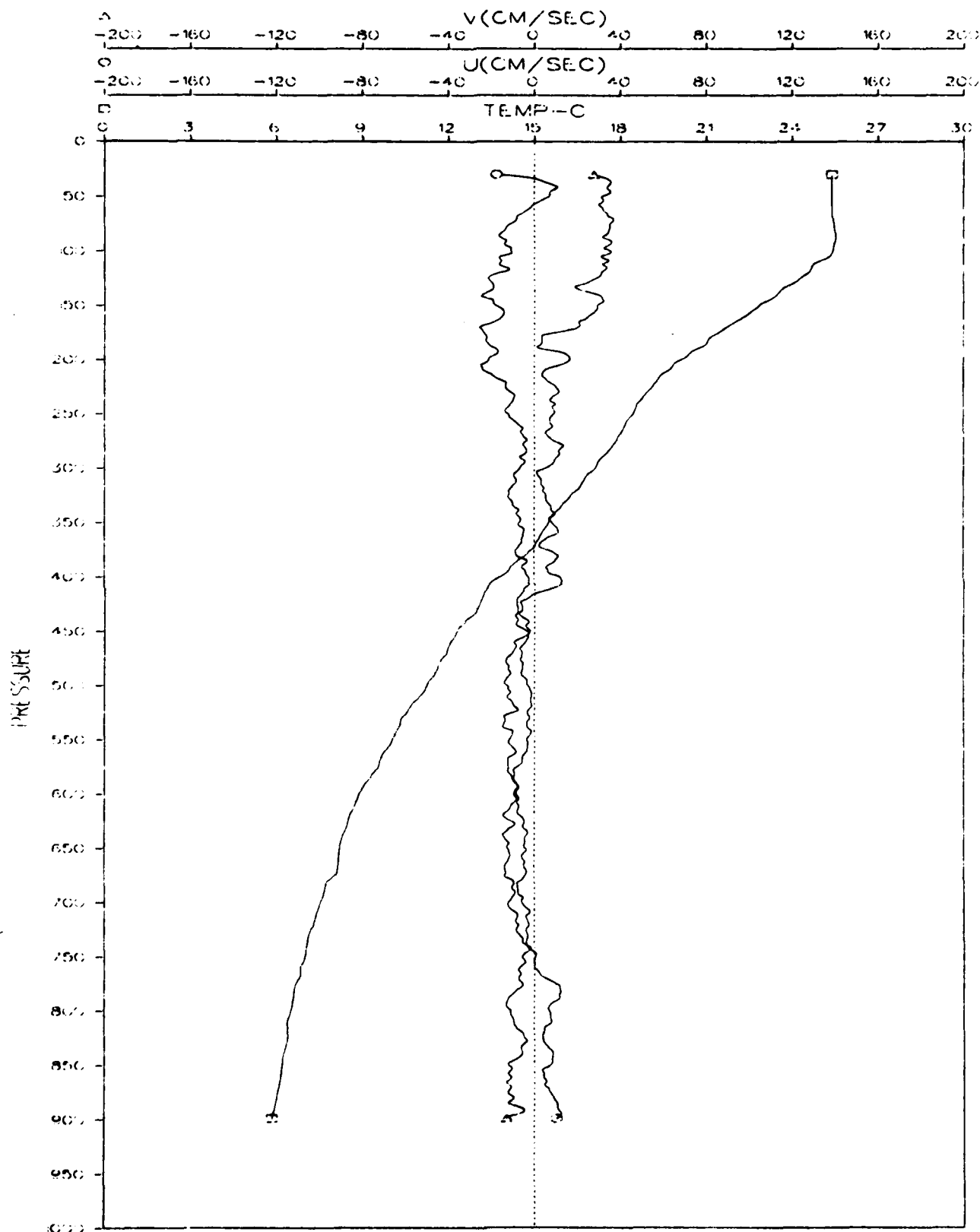


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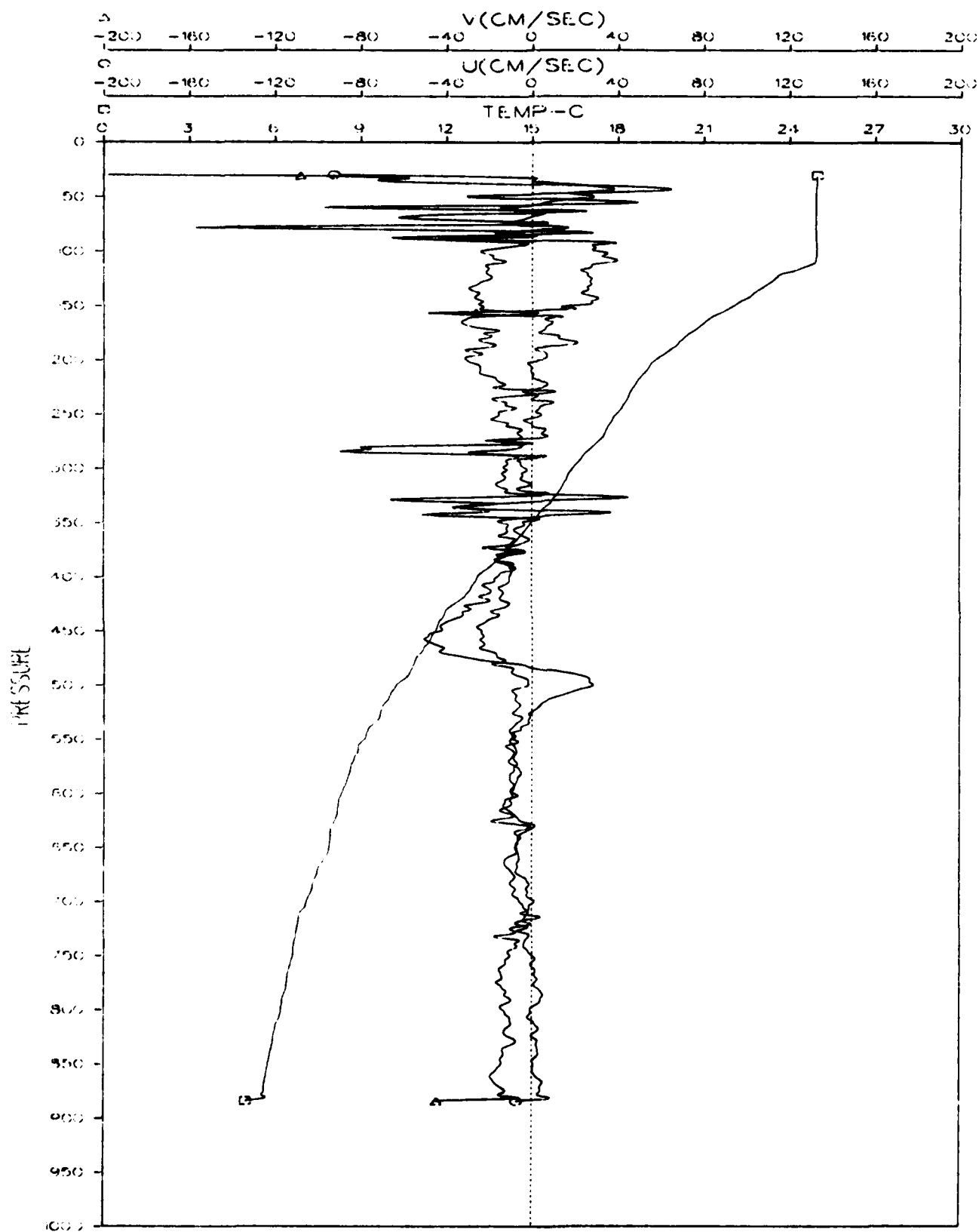


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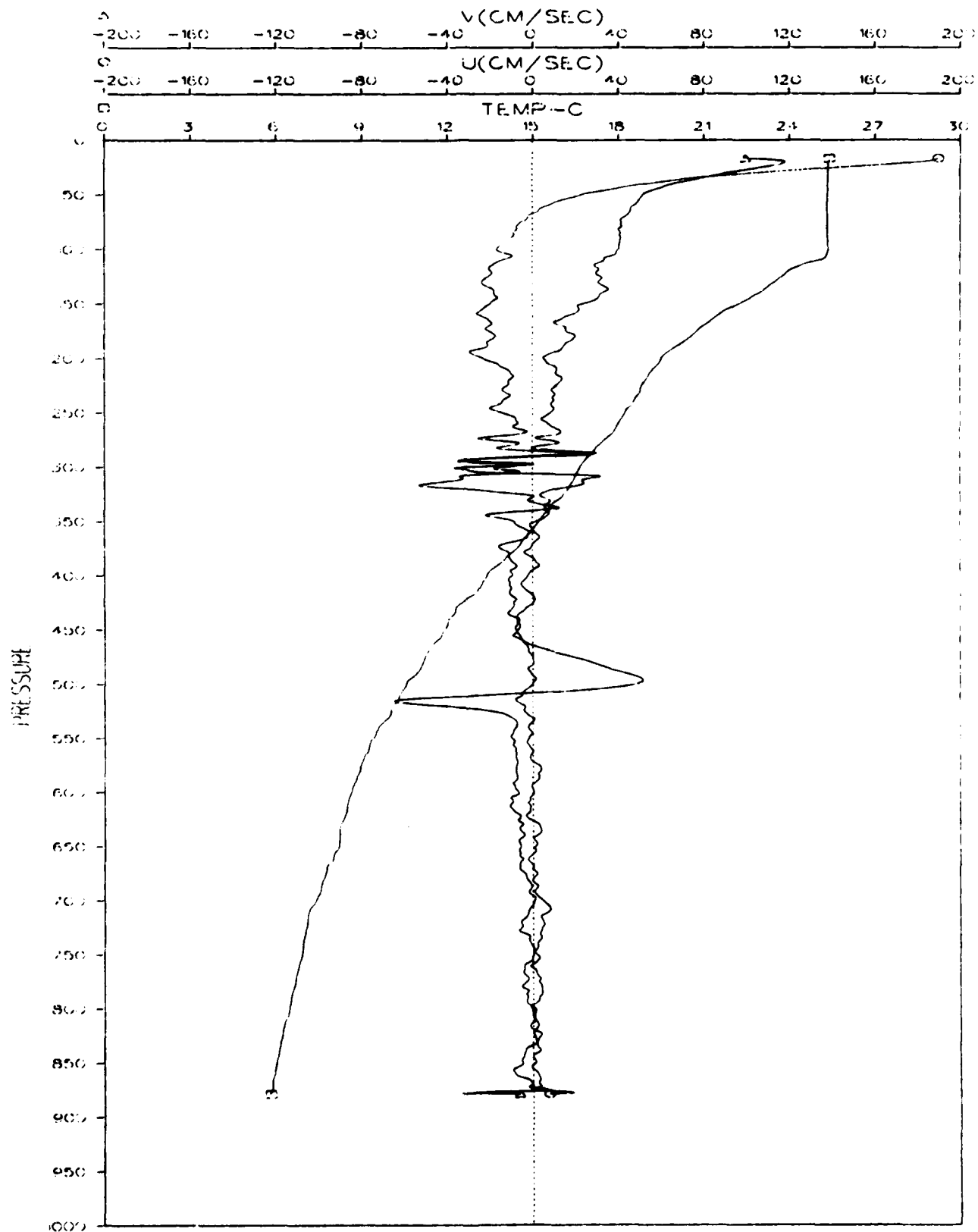


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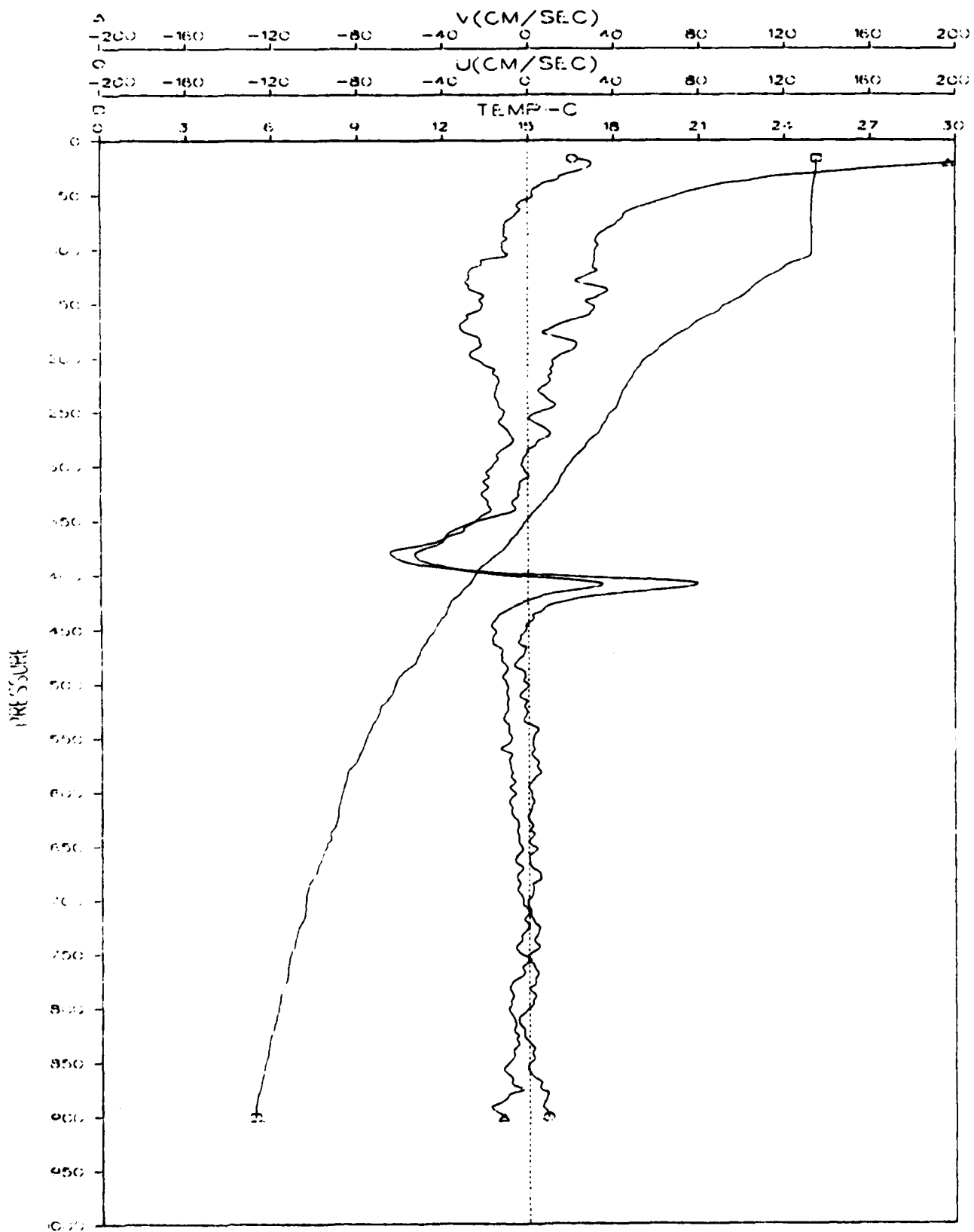


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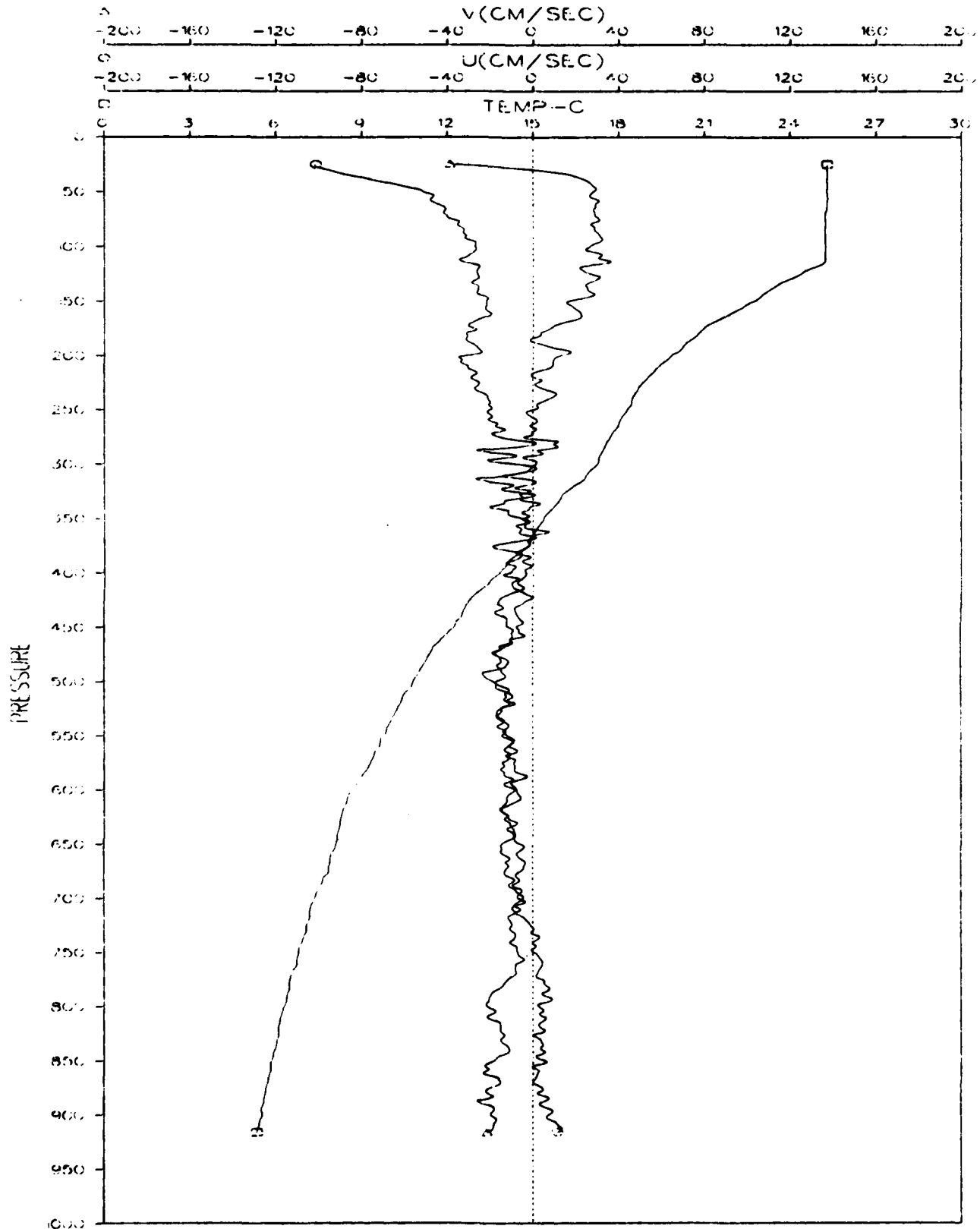


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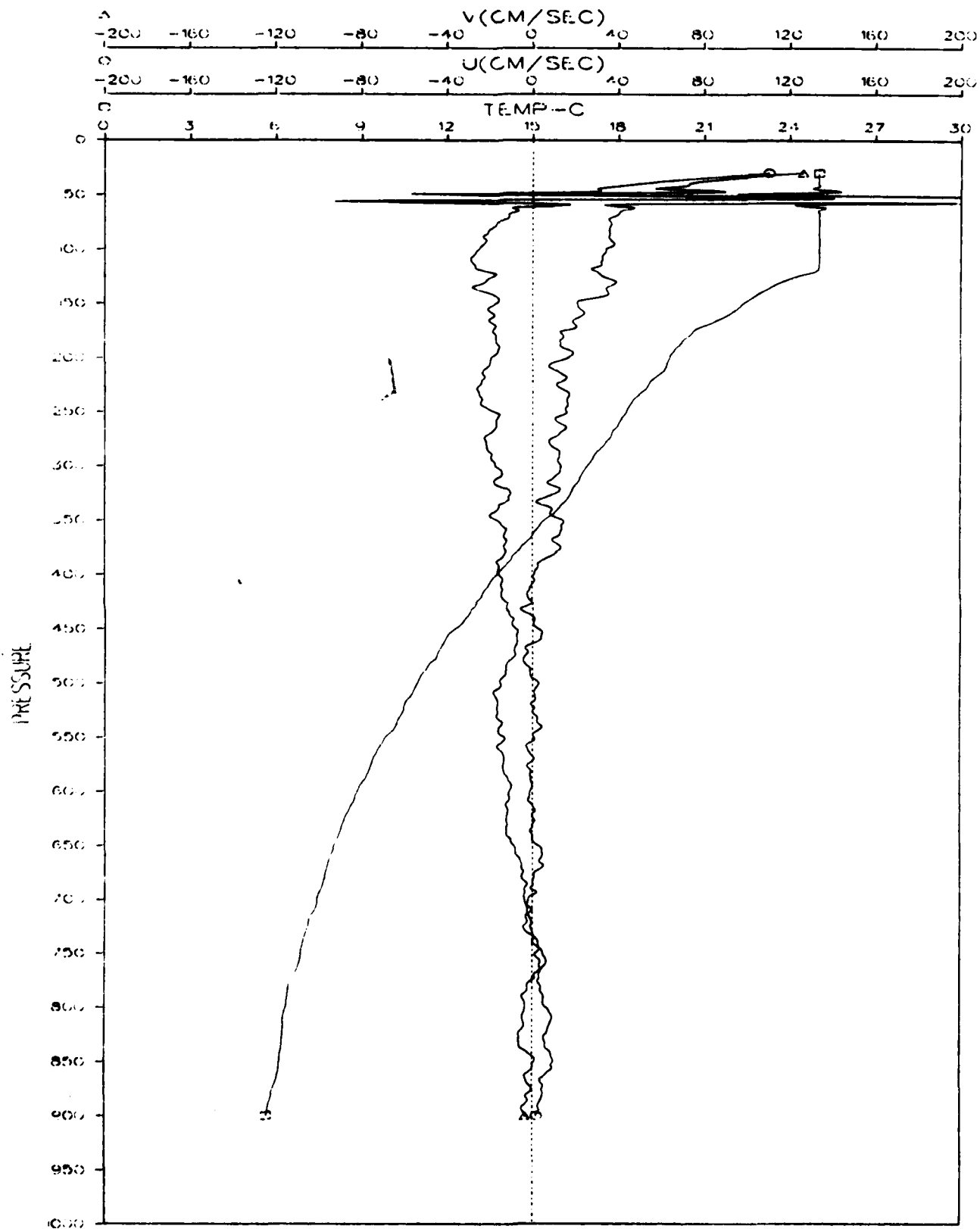


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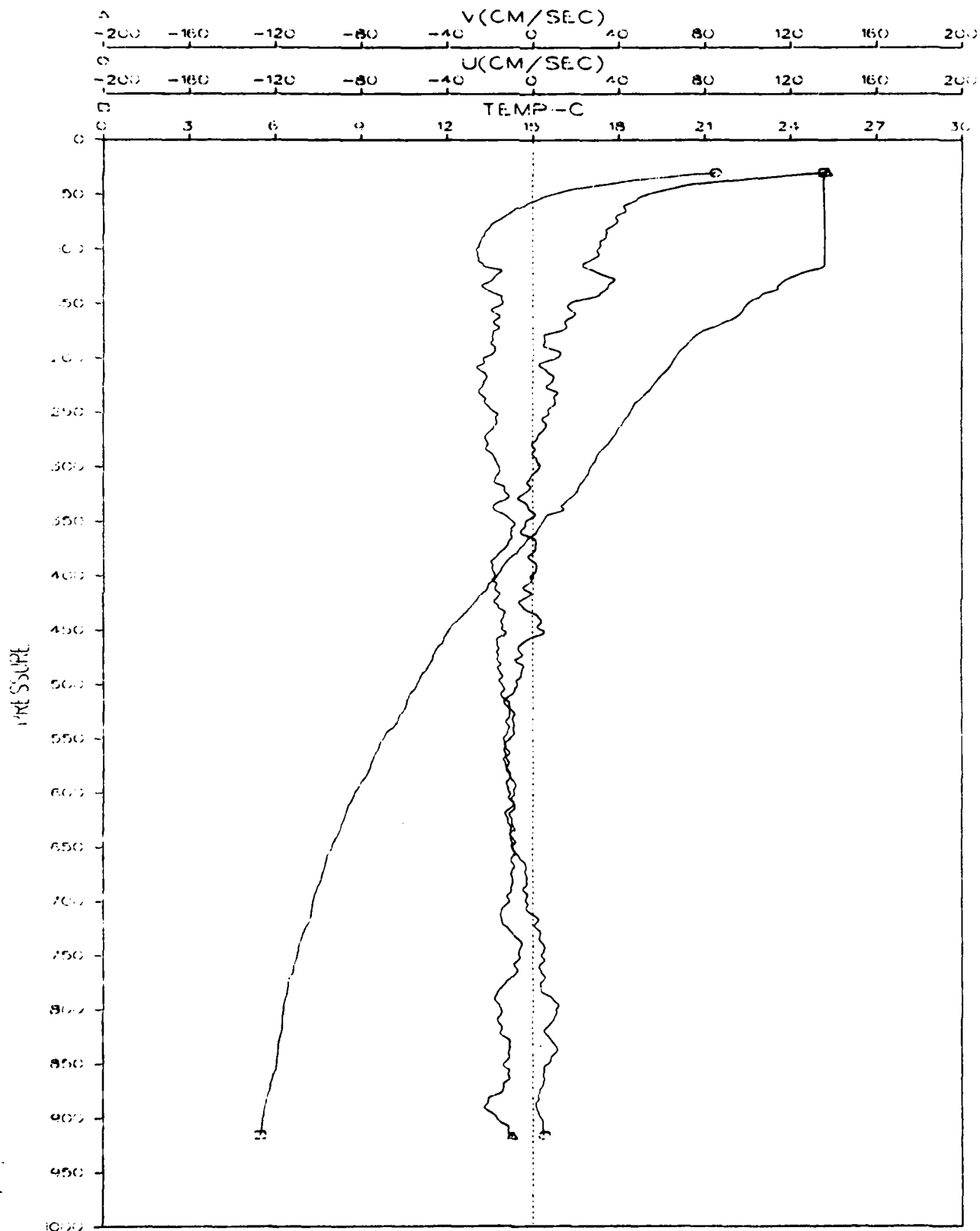


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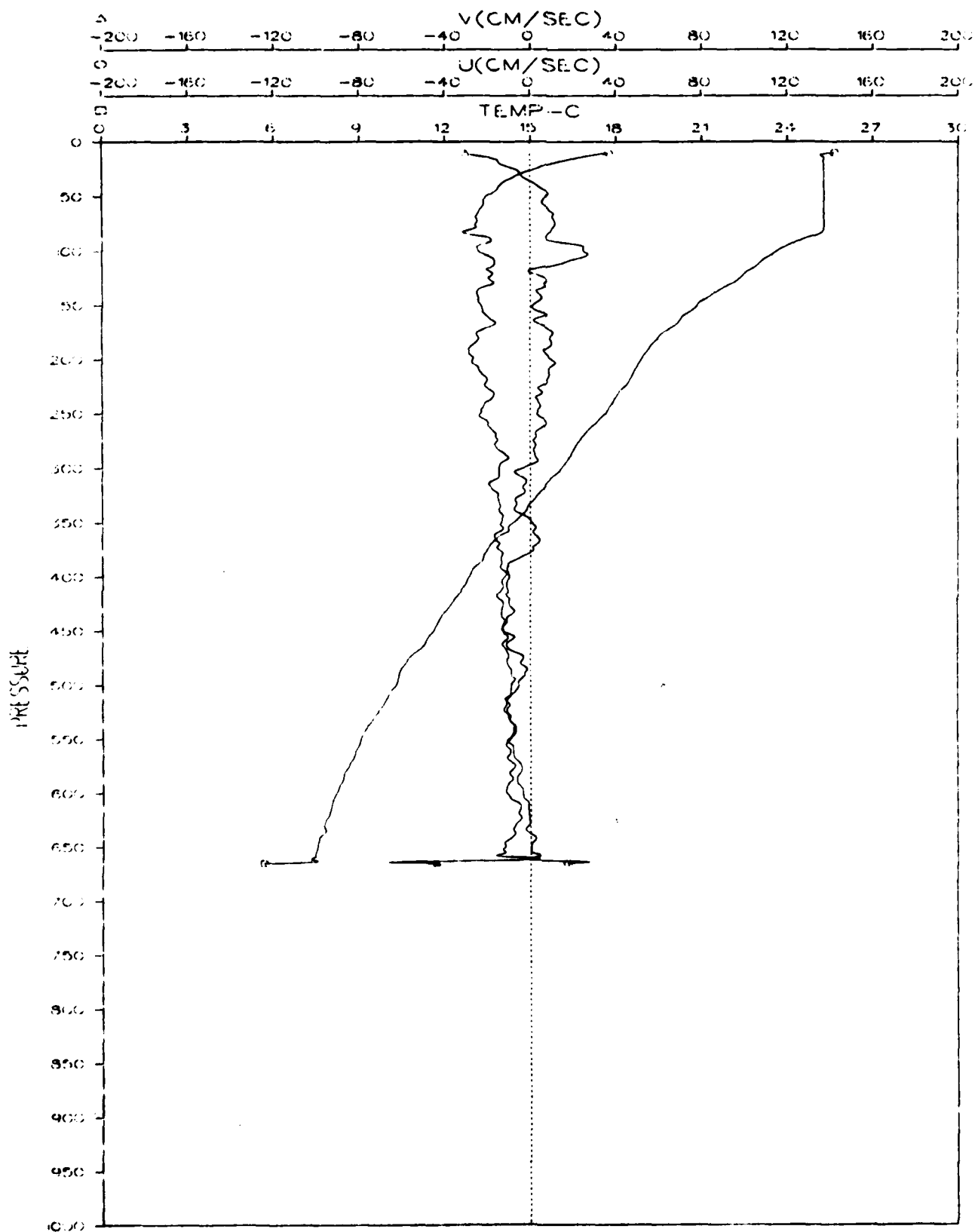


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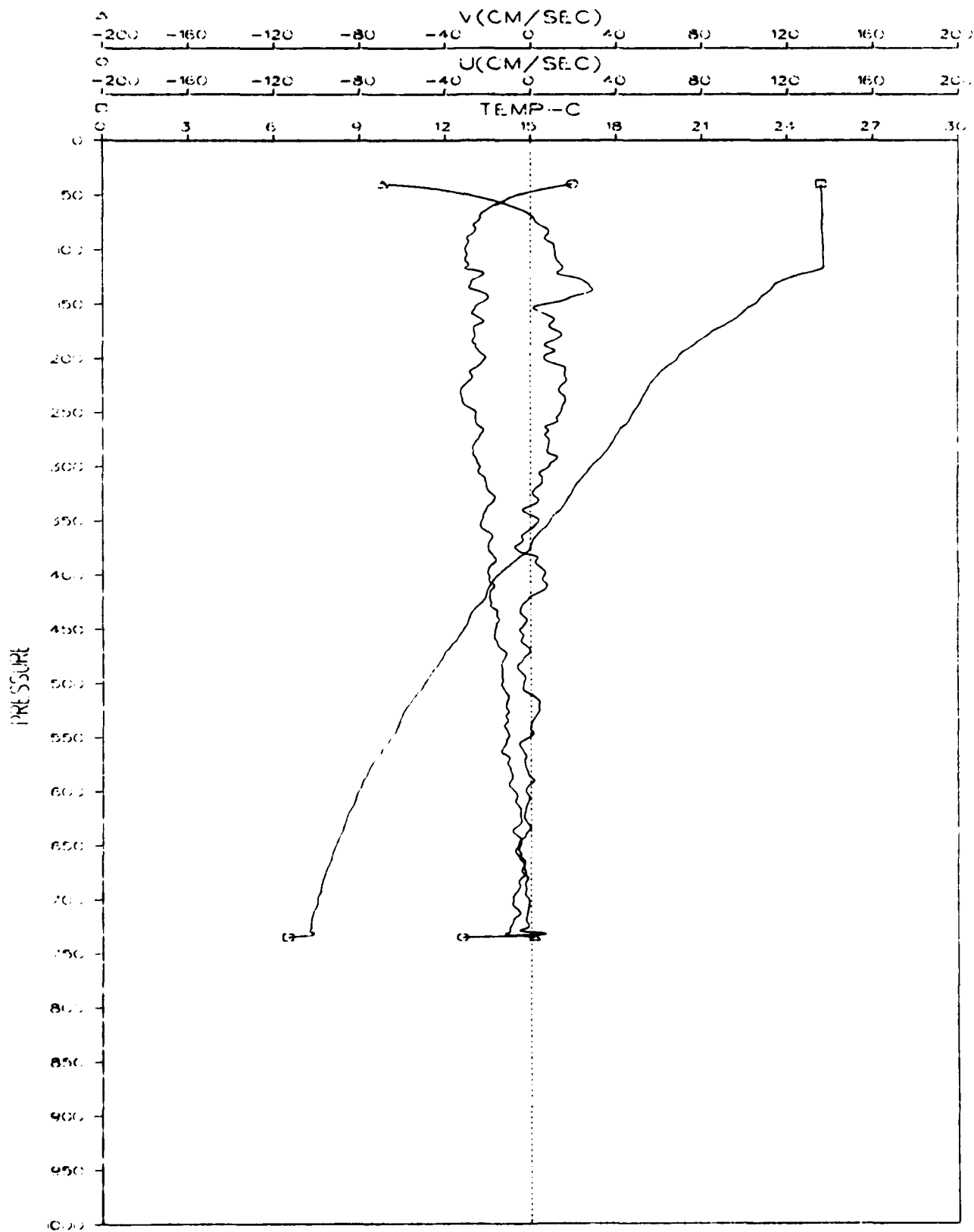


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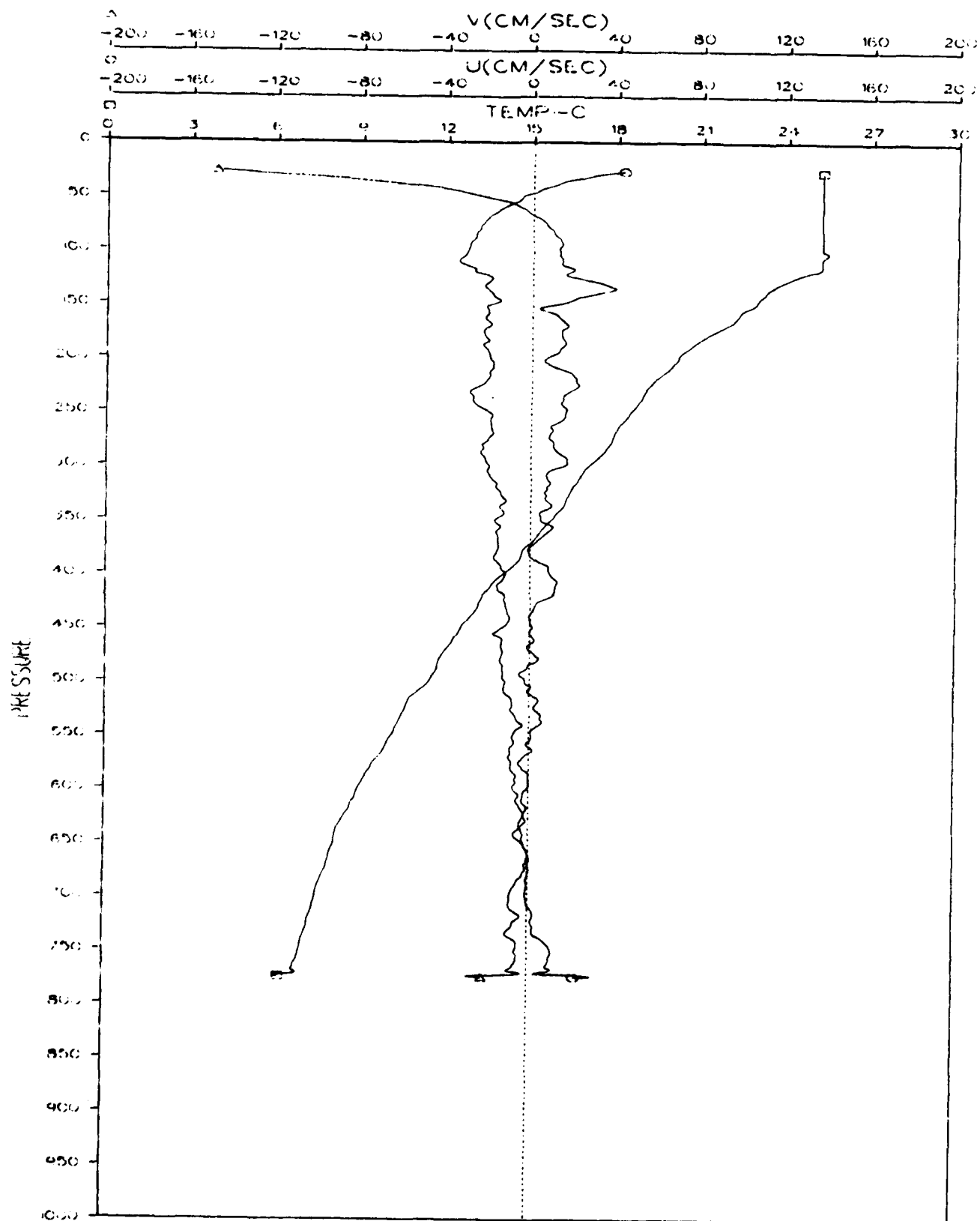


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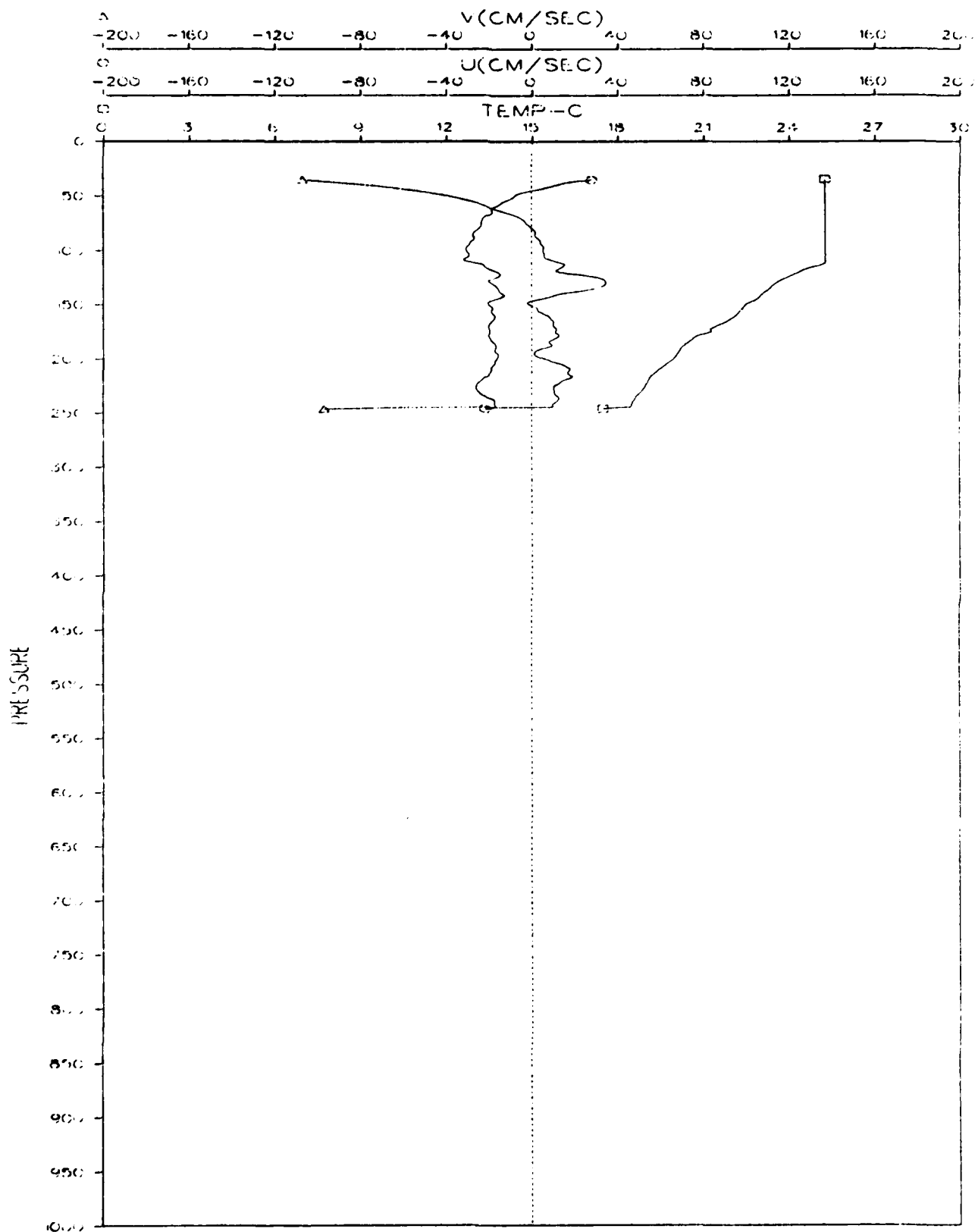


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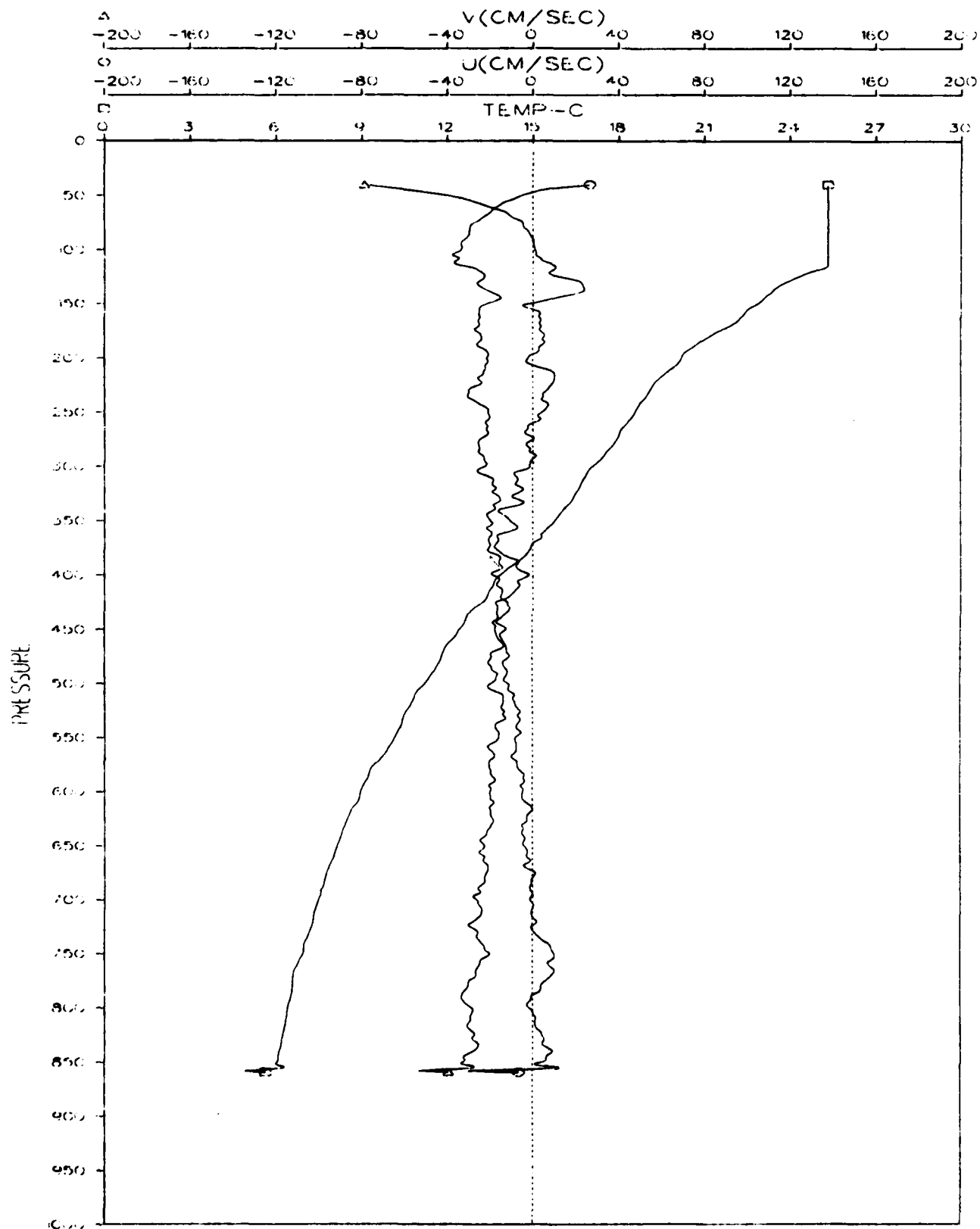


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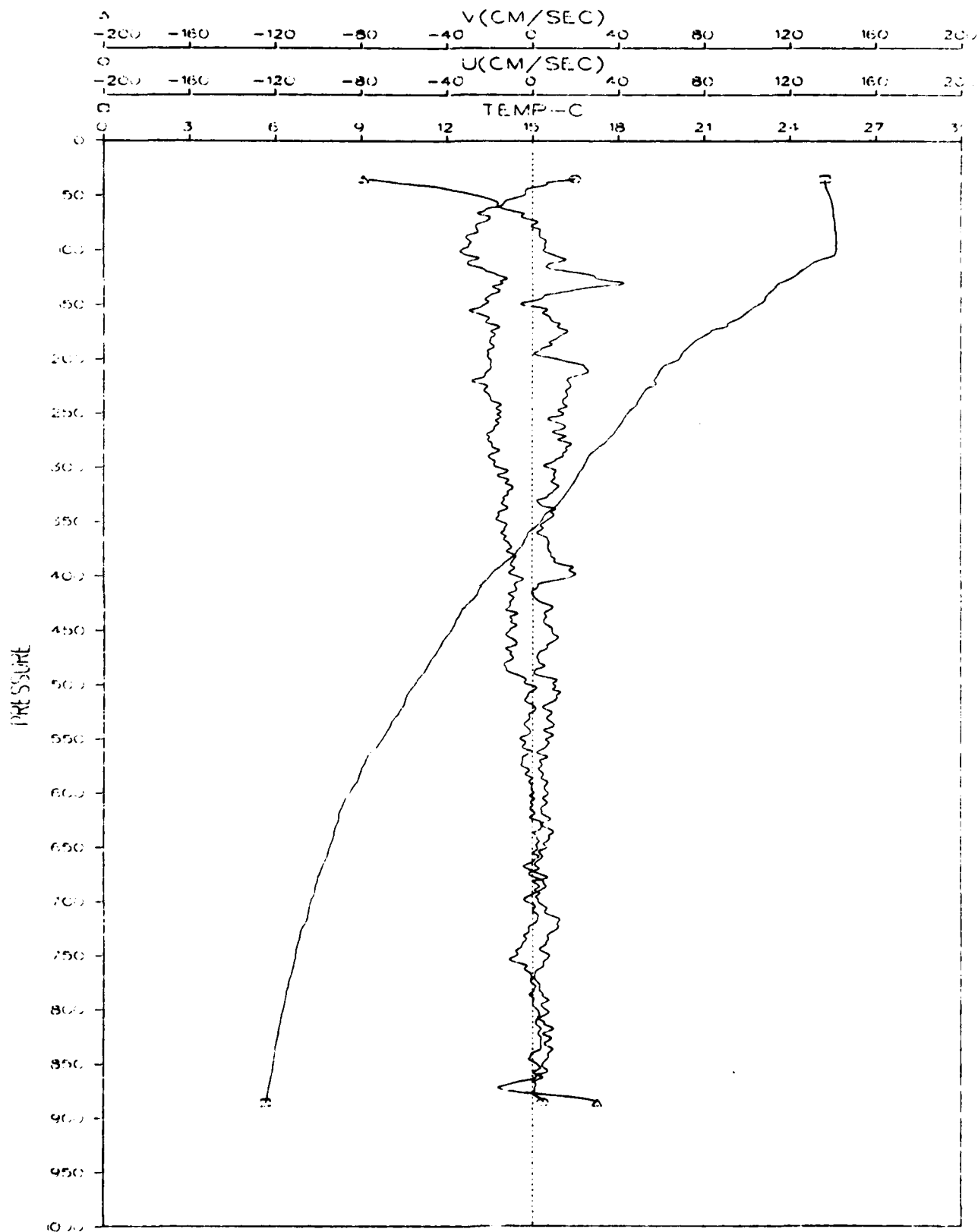


Figure 574

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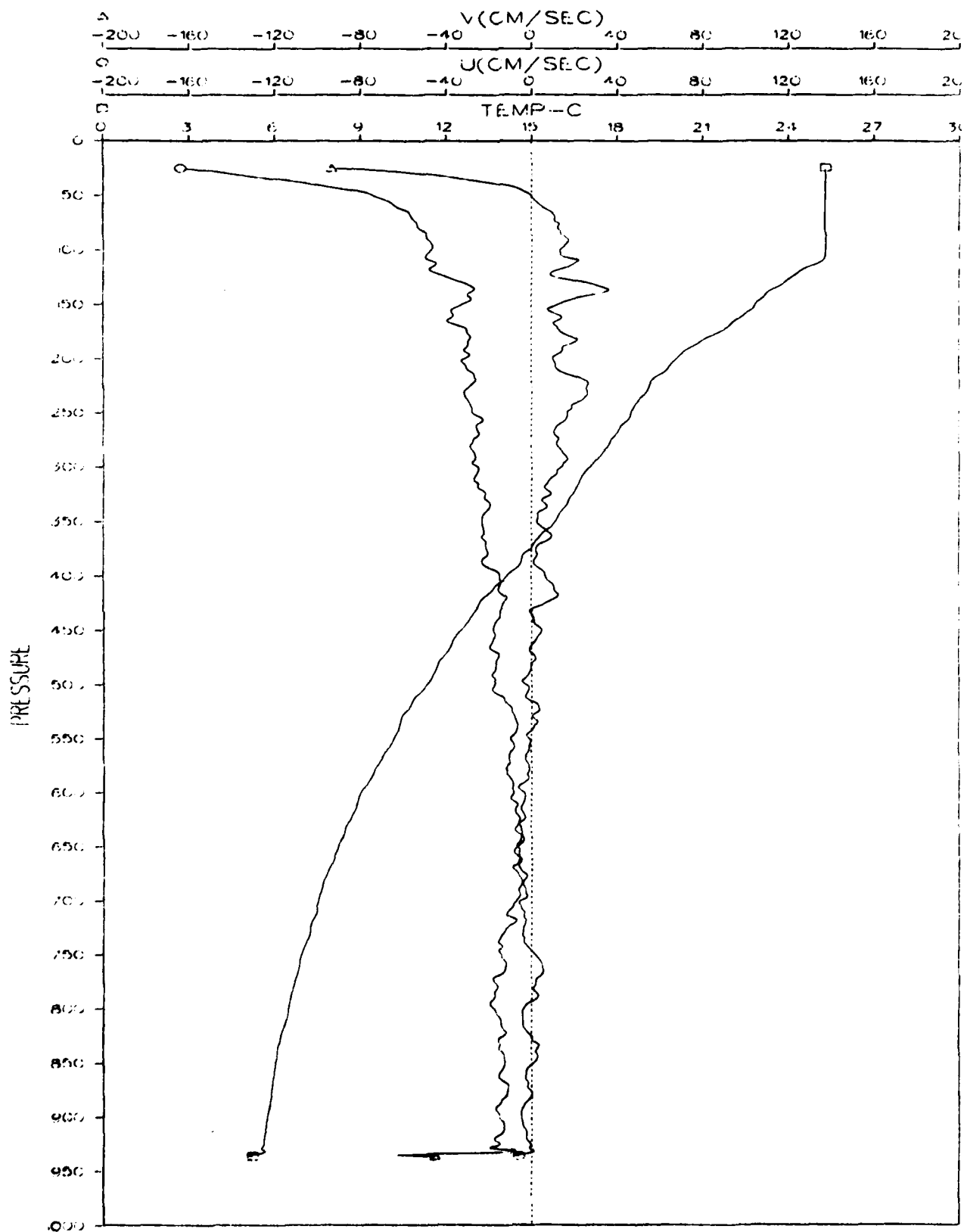


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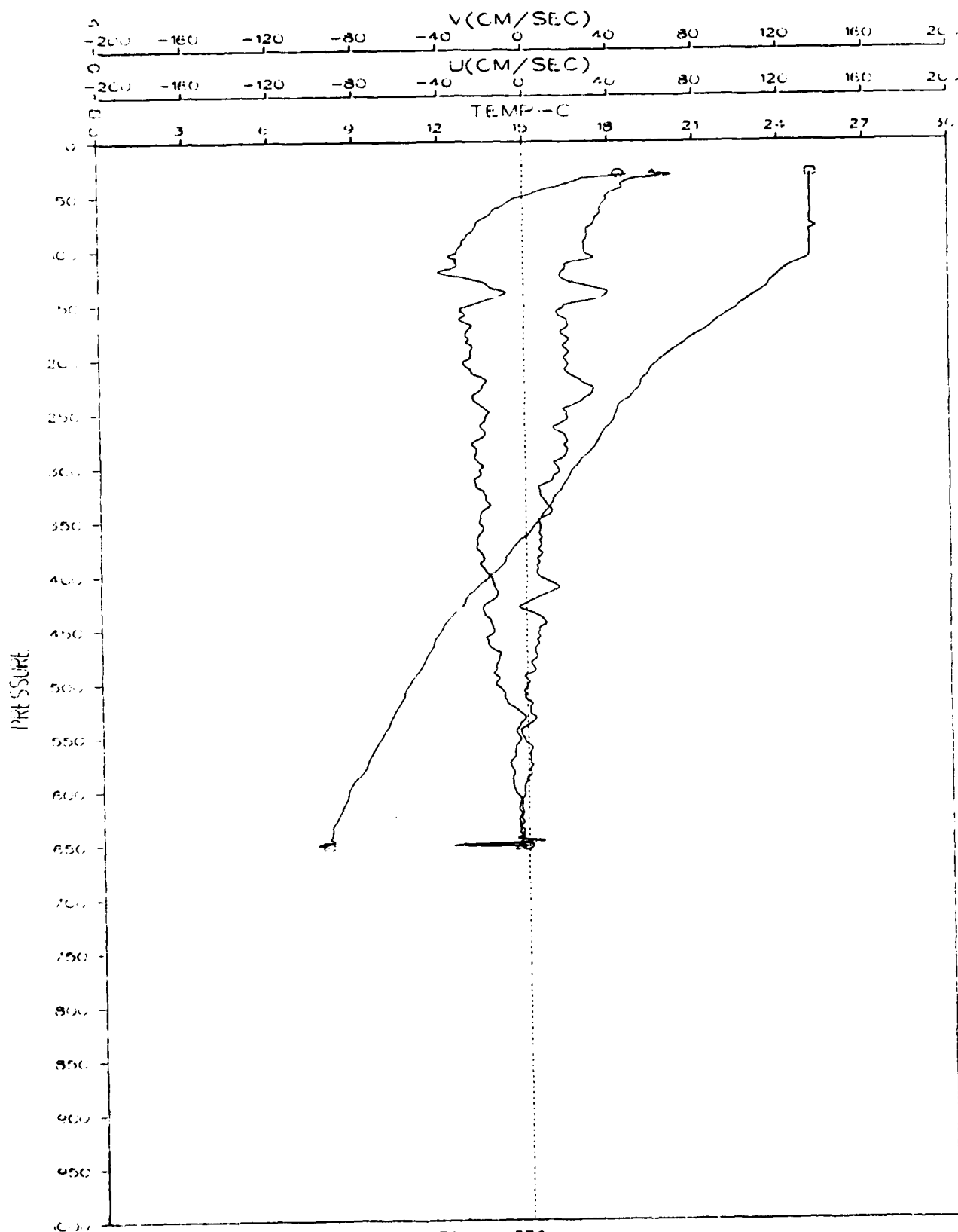


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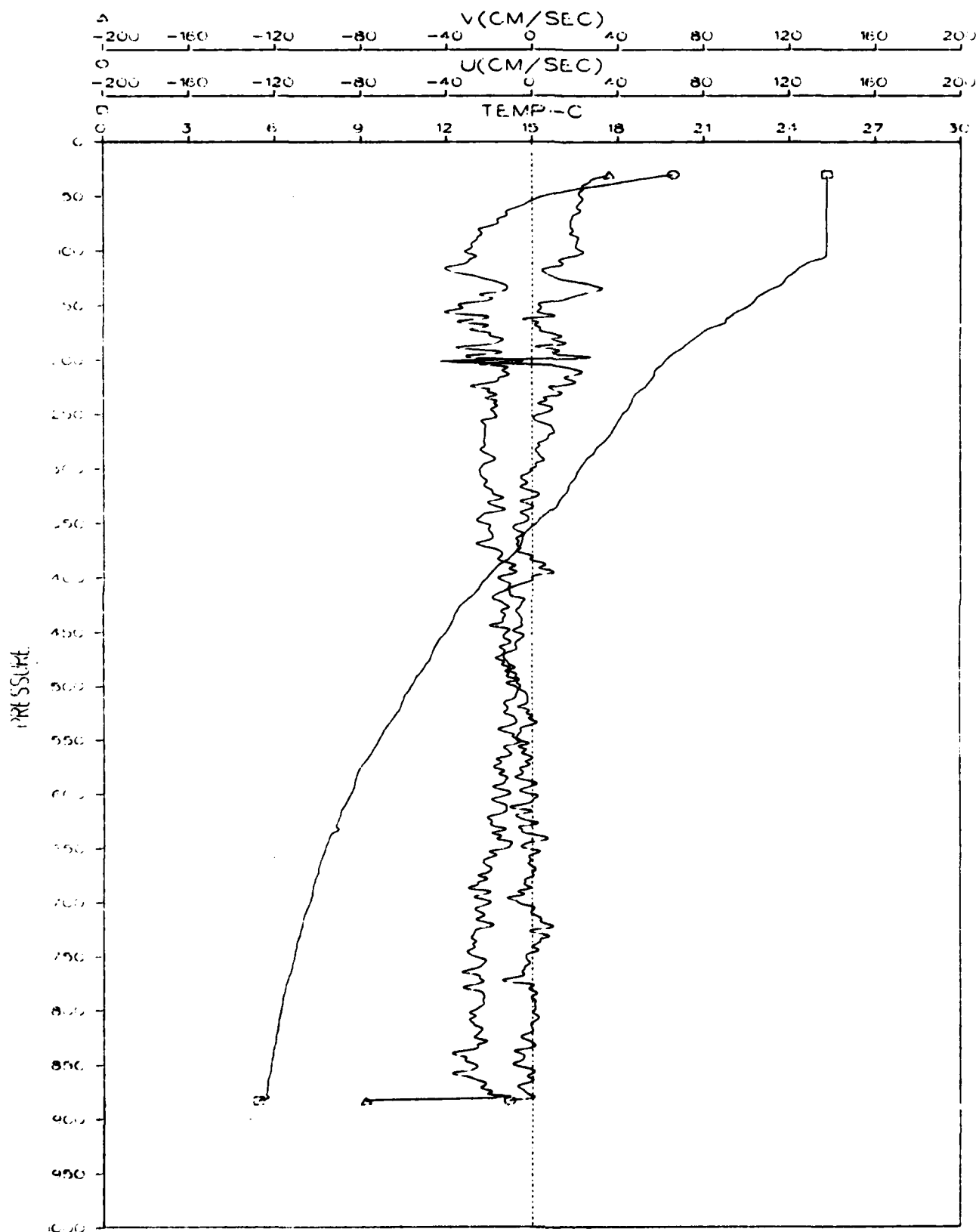


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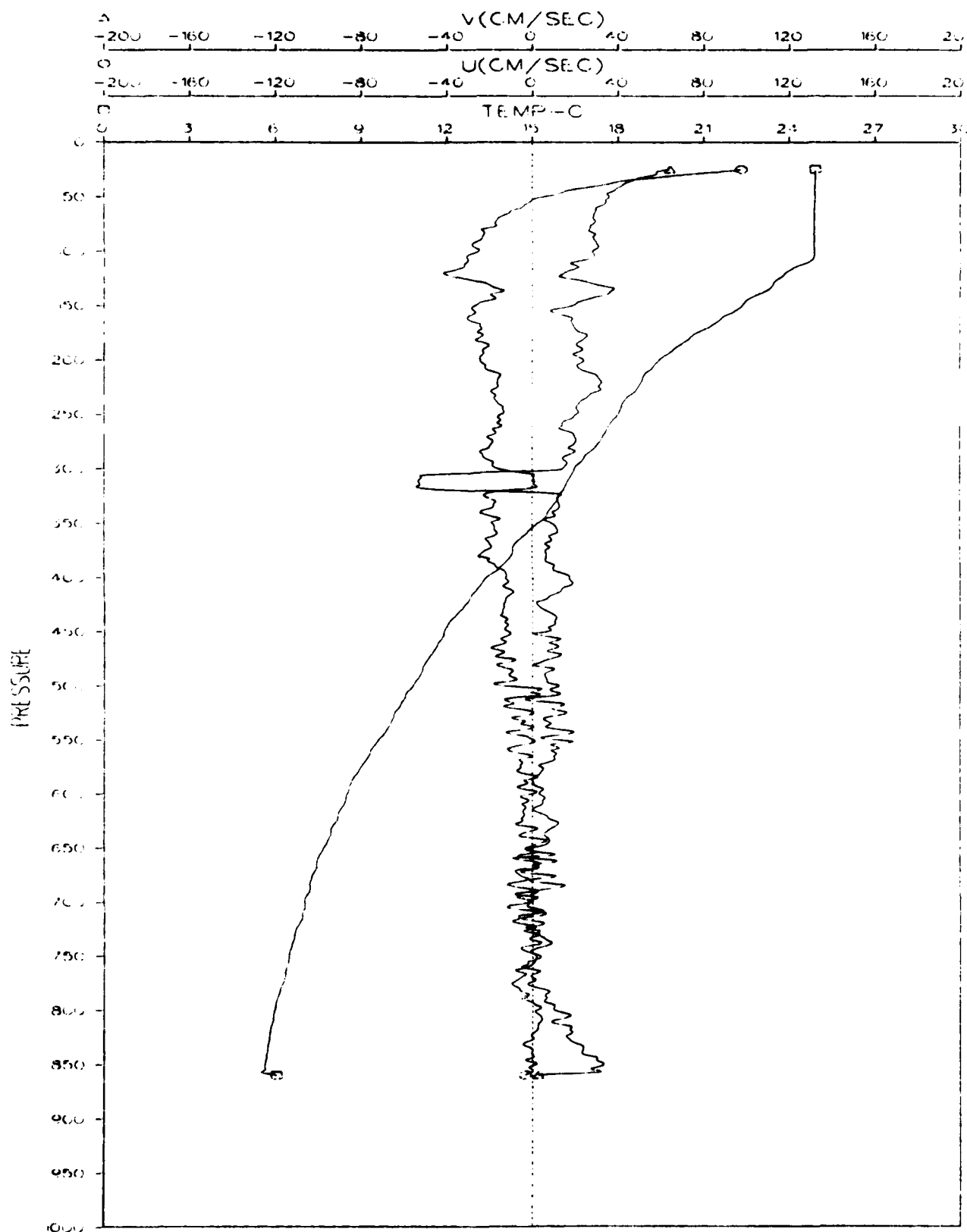


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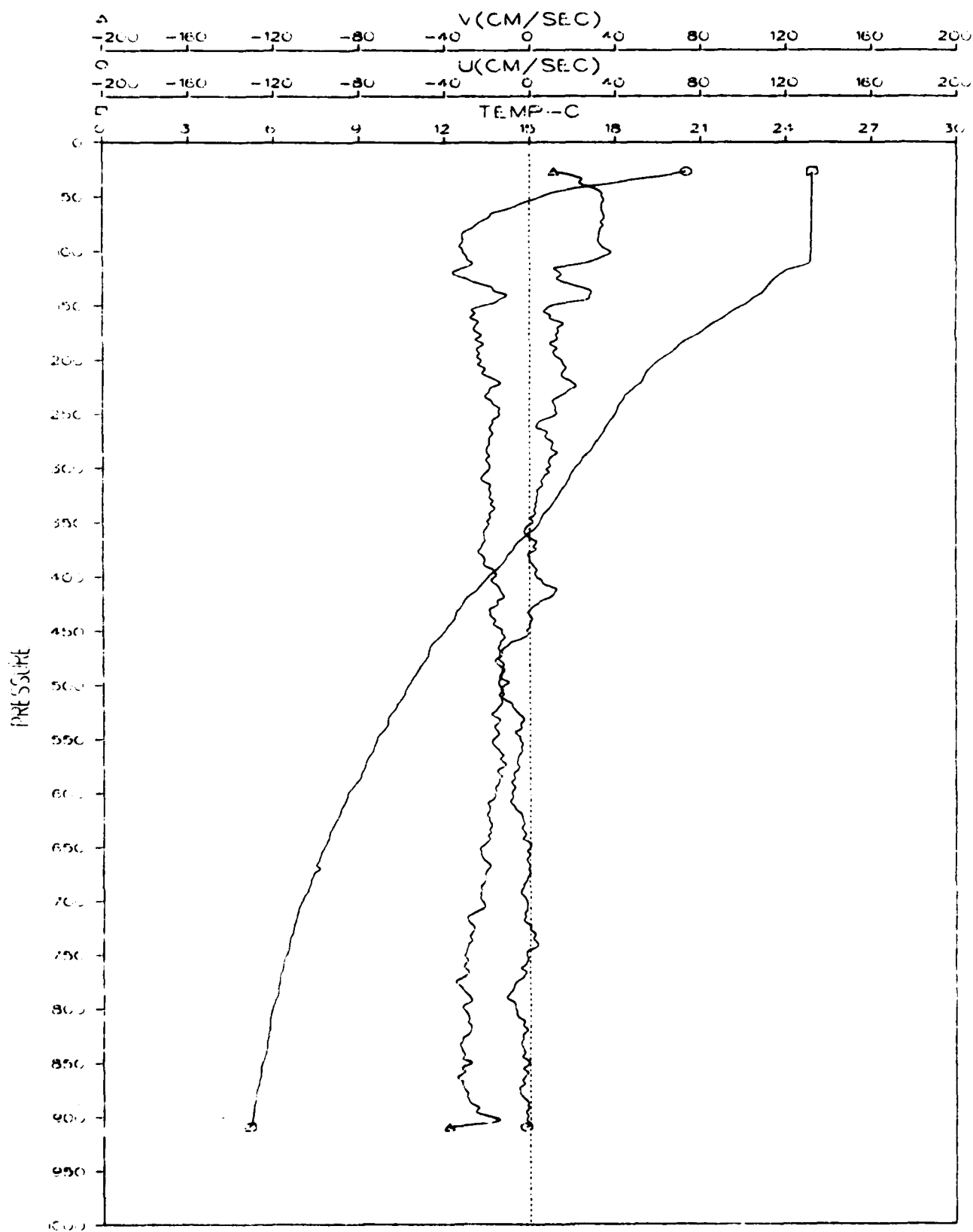


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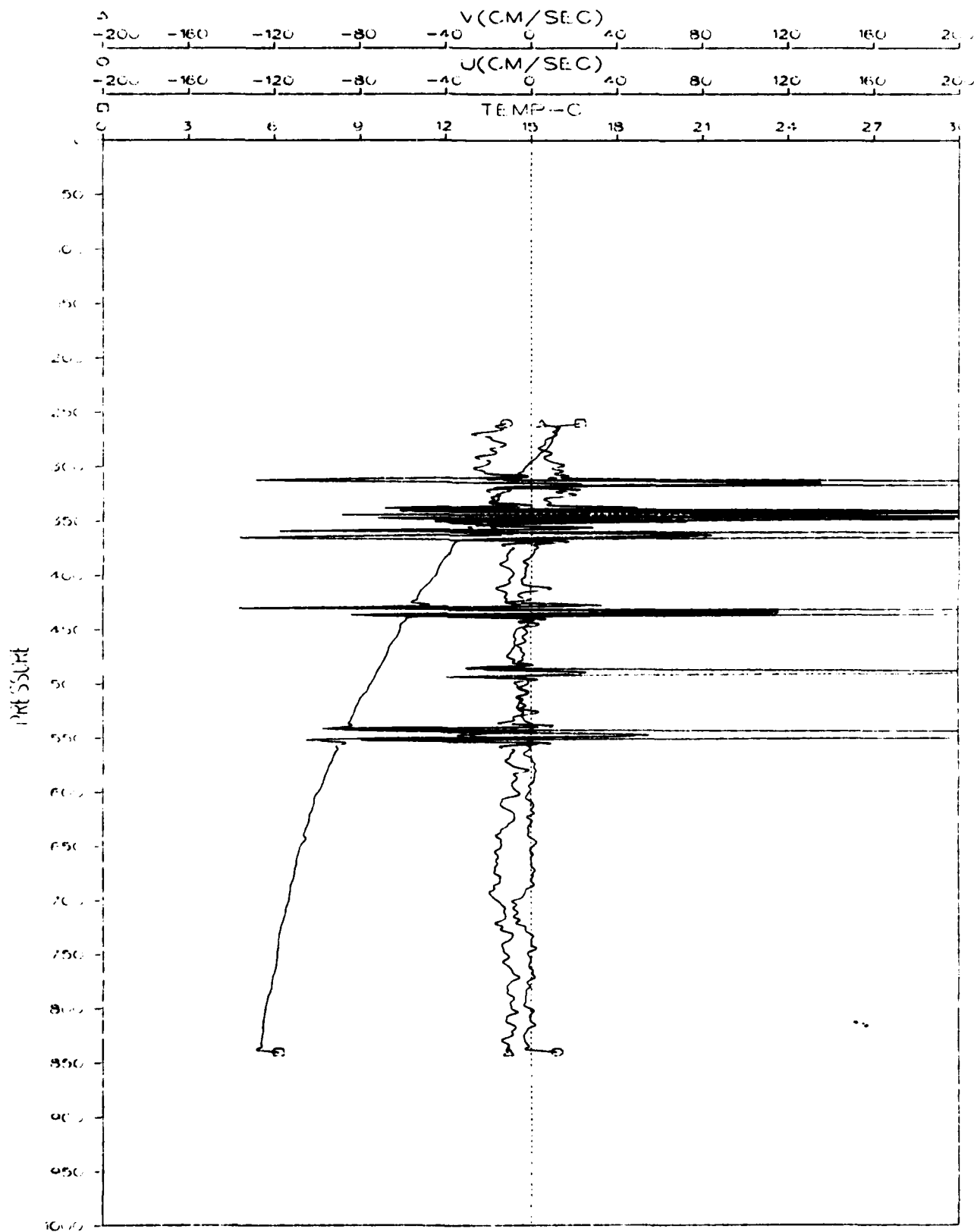


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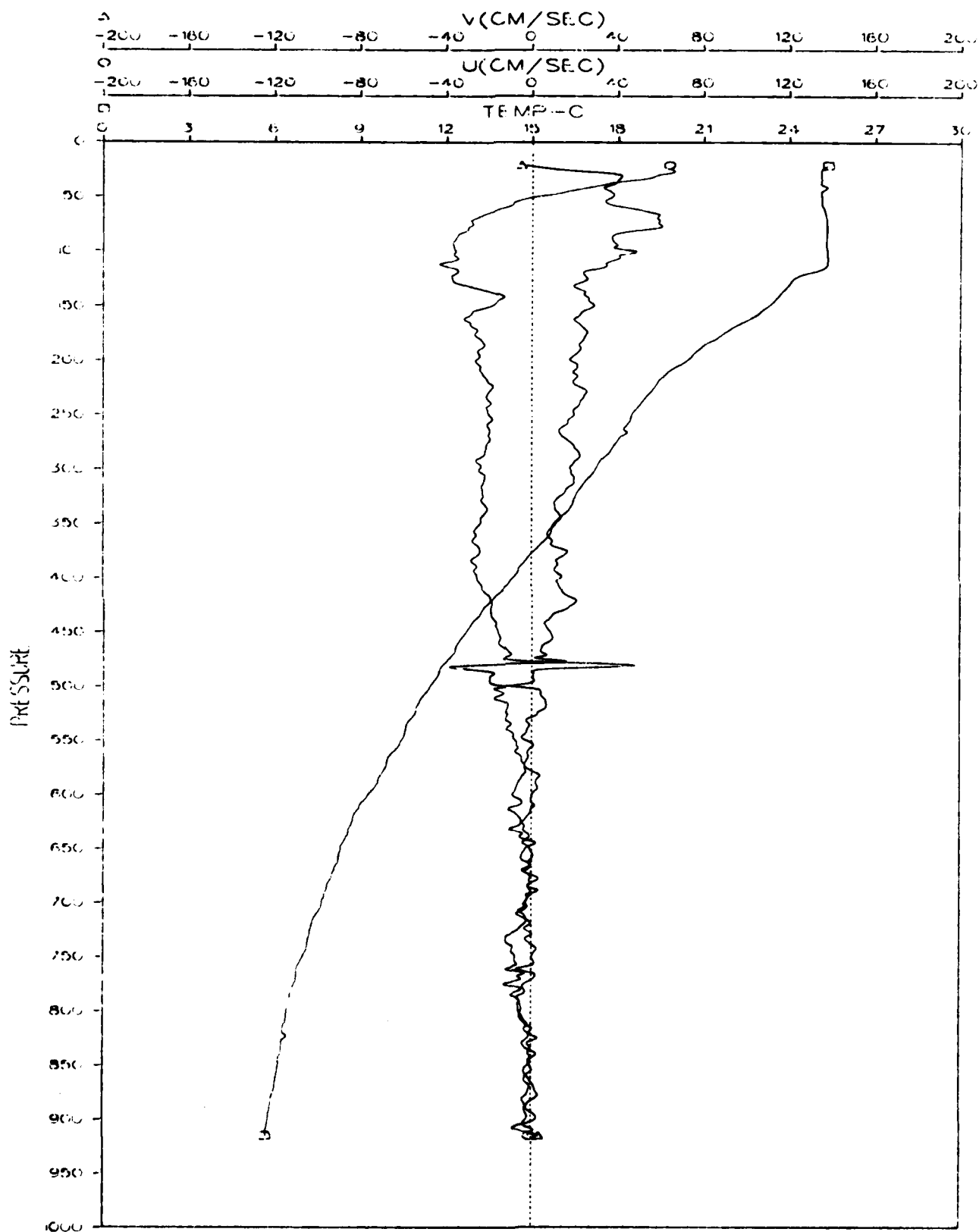


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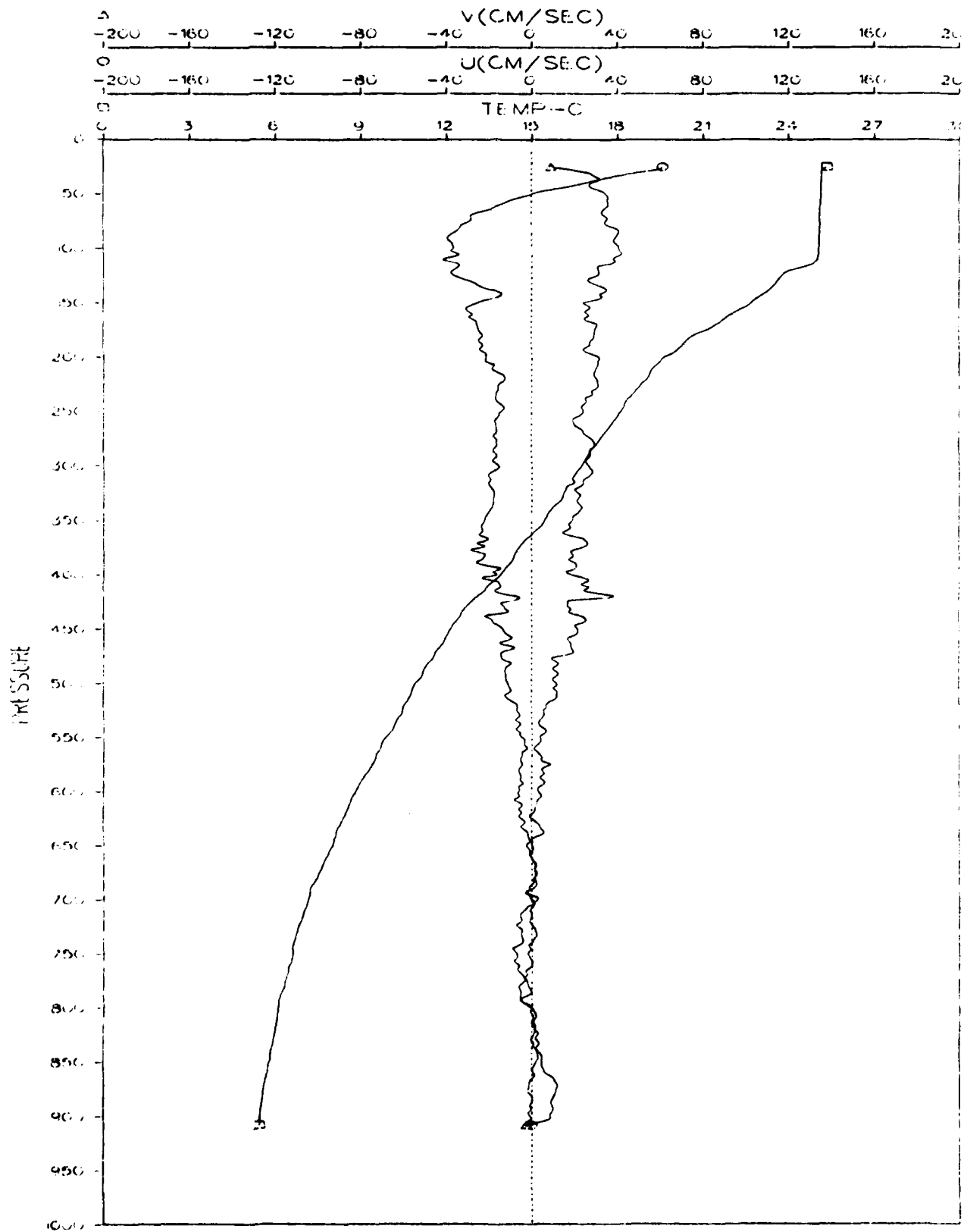


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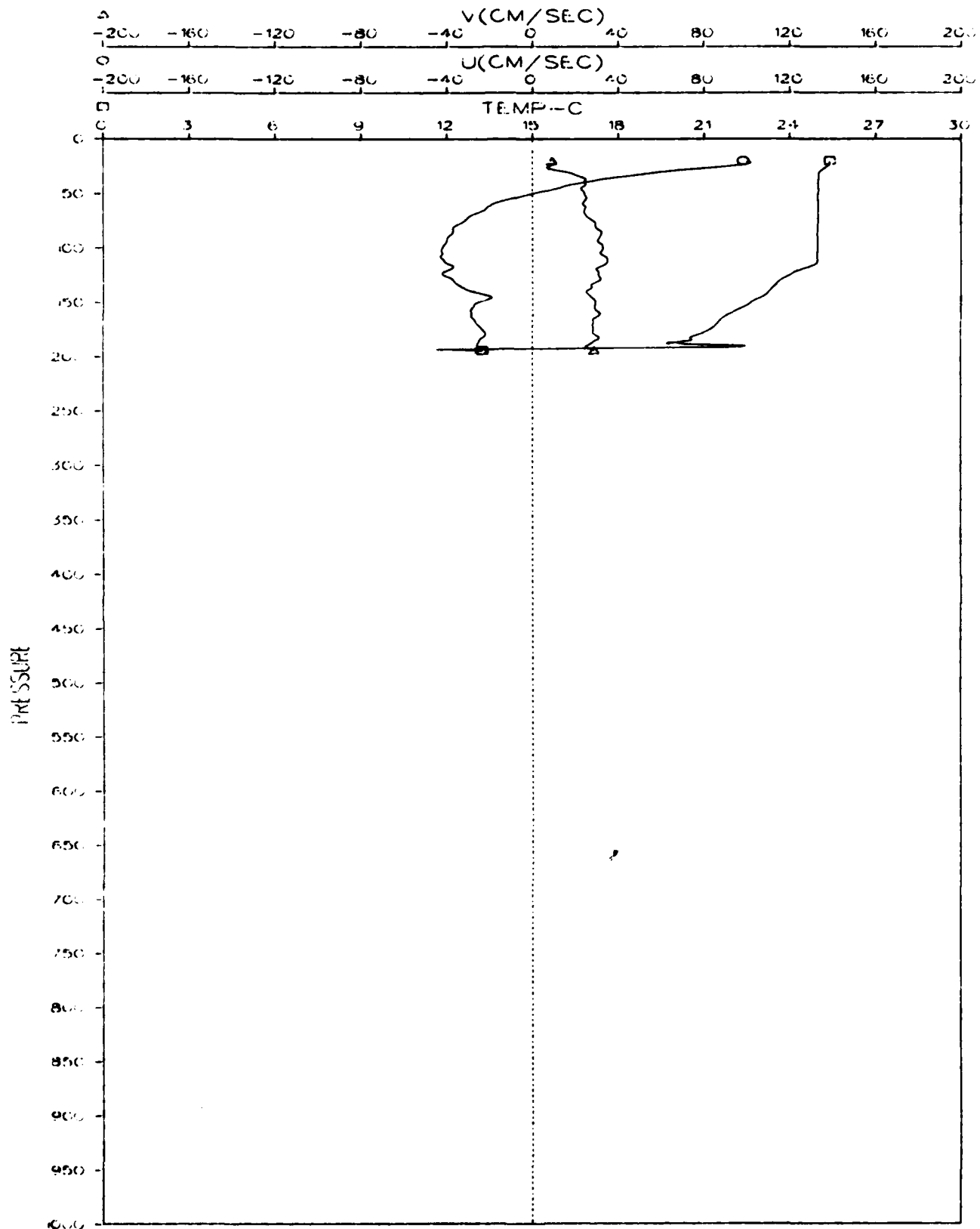


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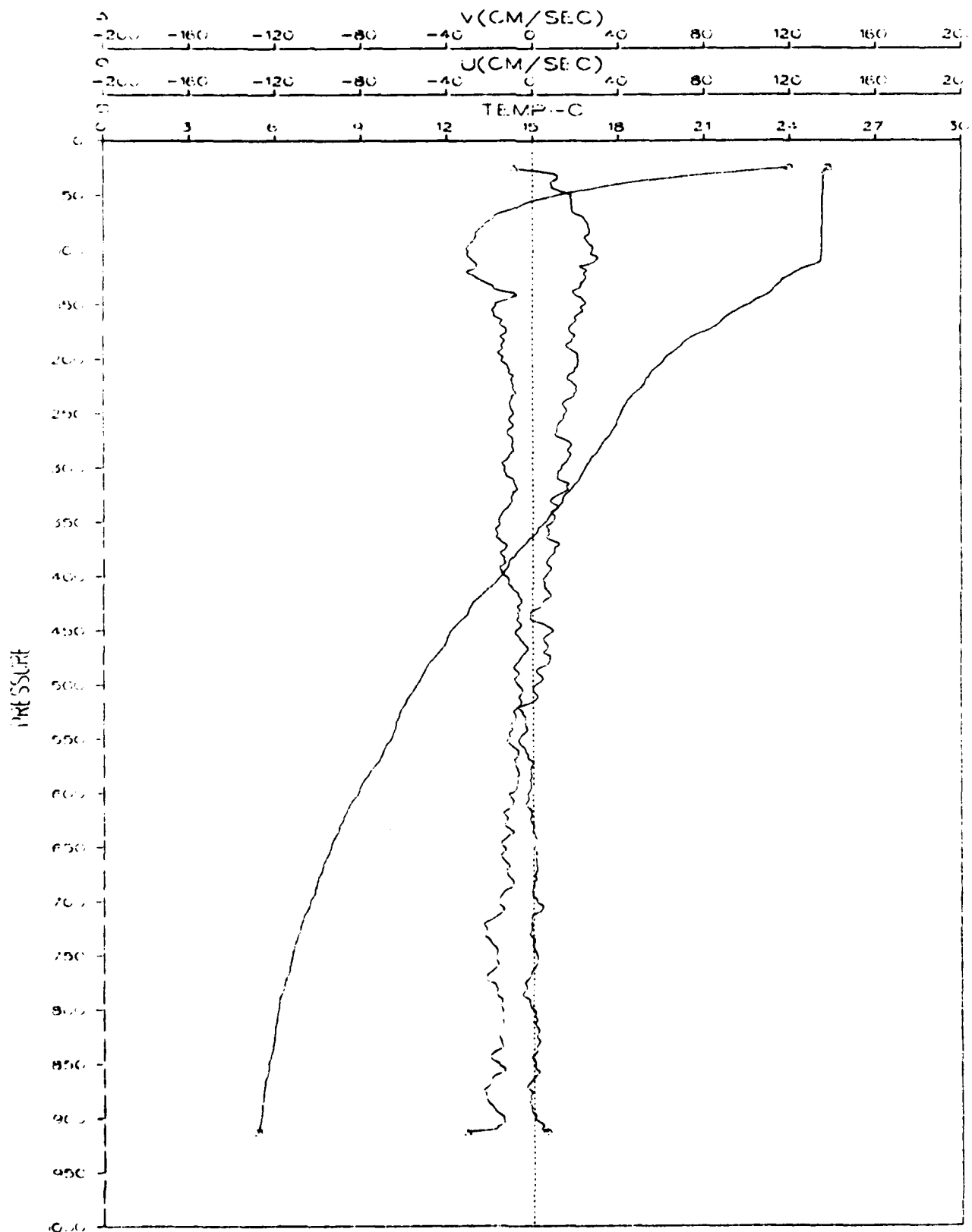


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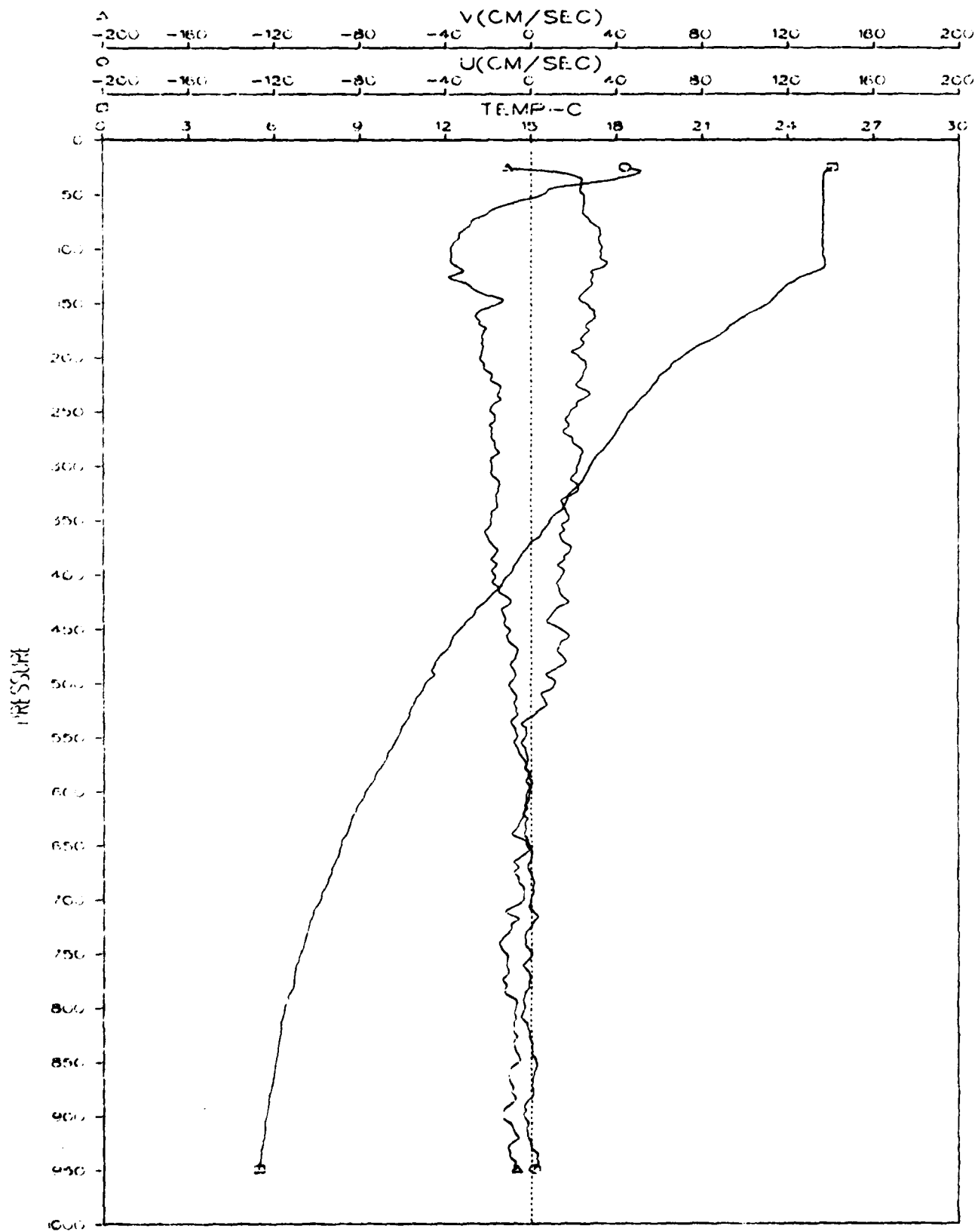


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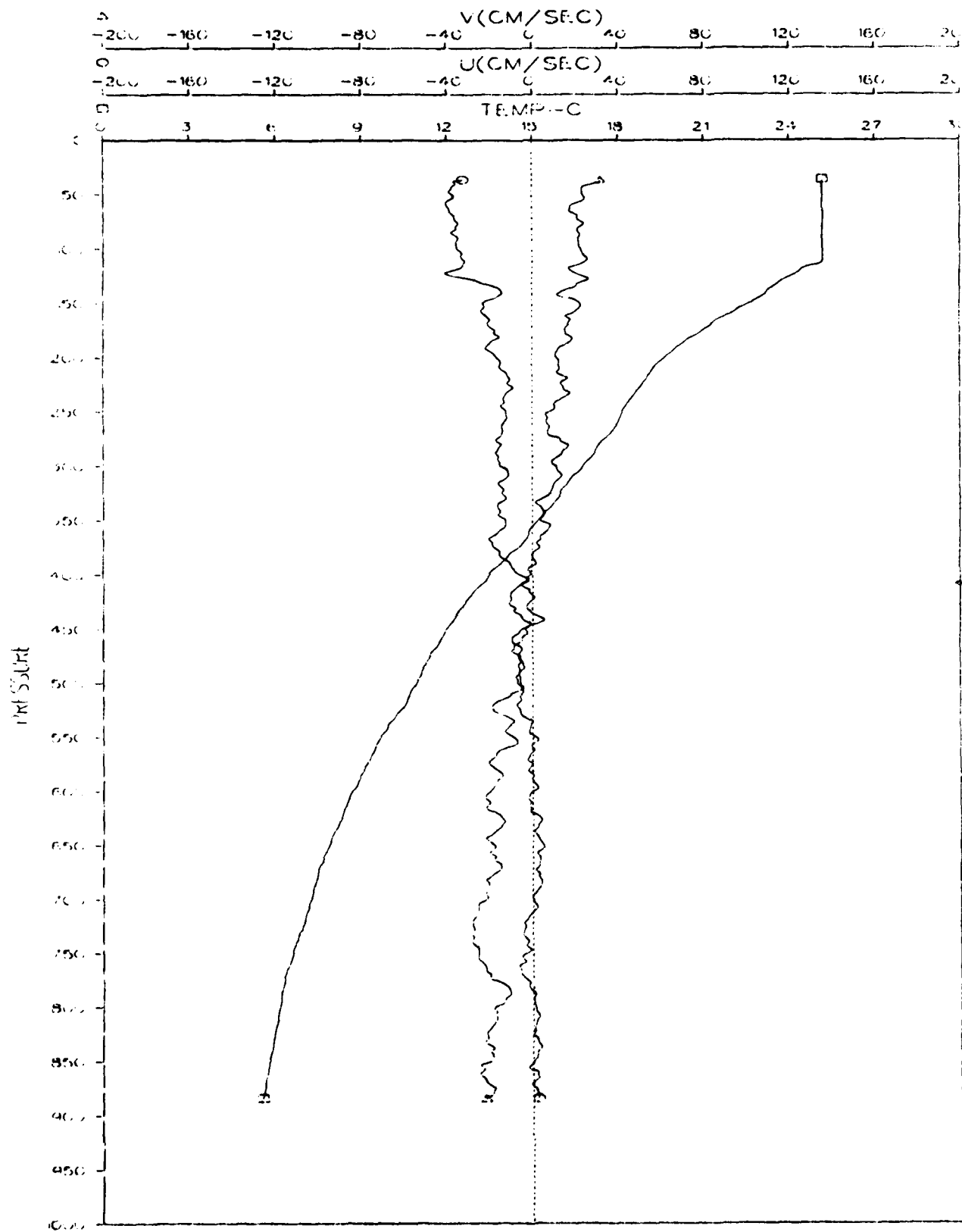


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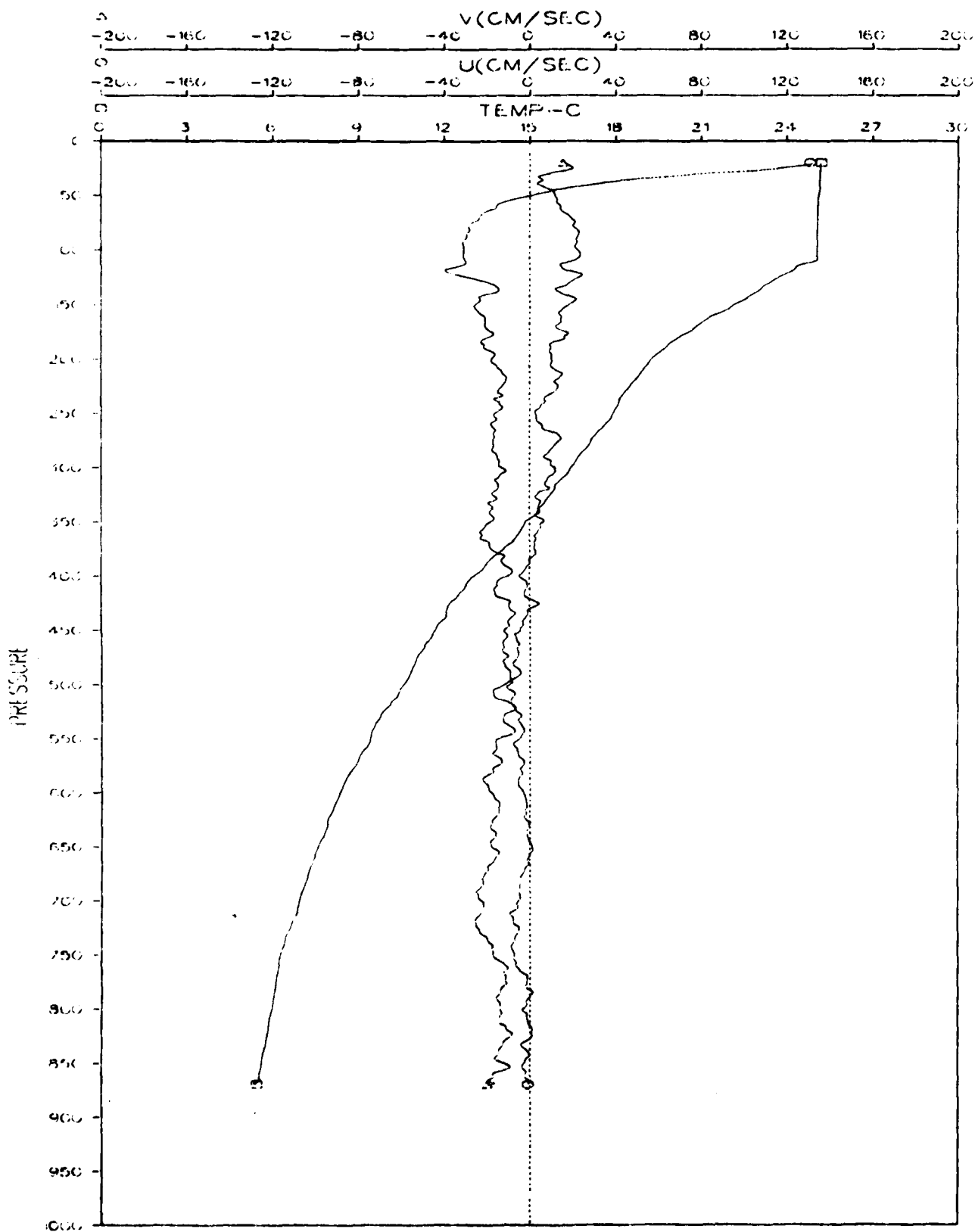


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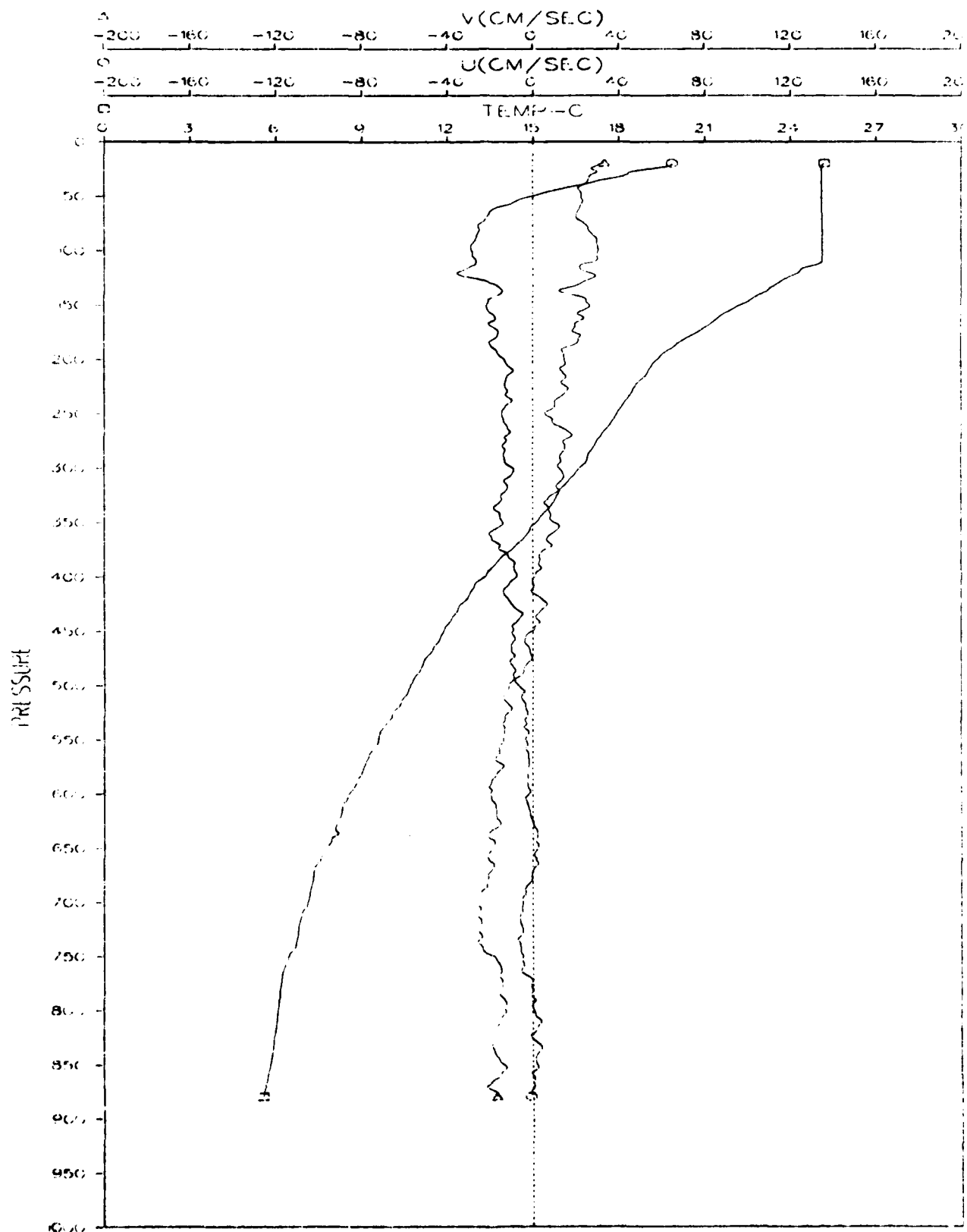


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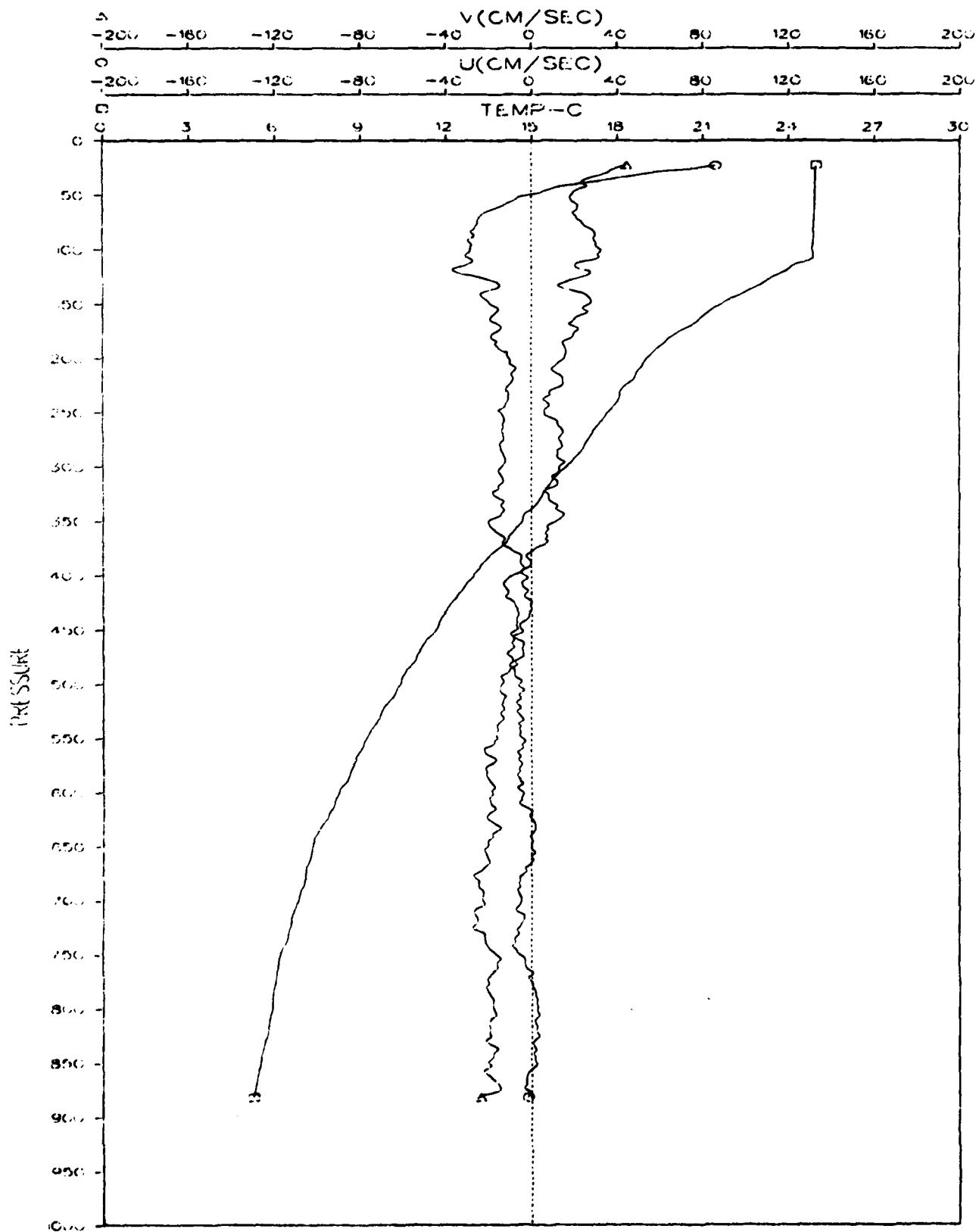


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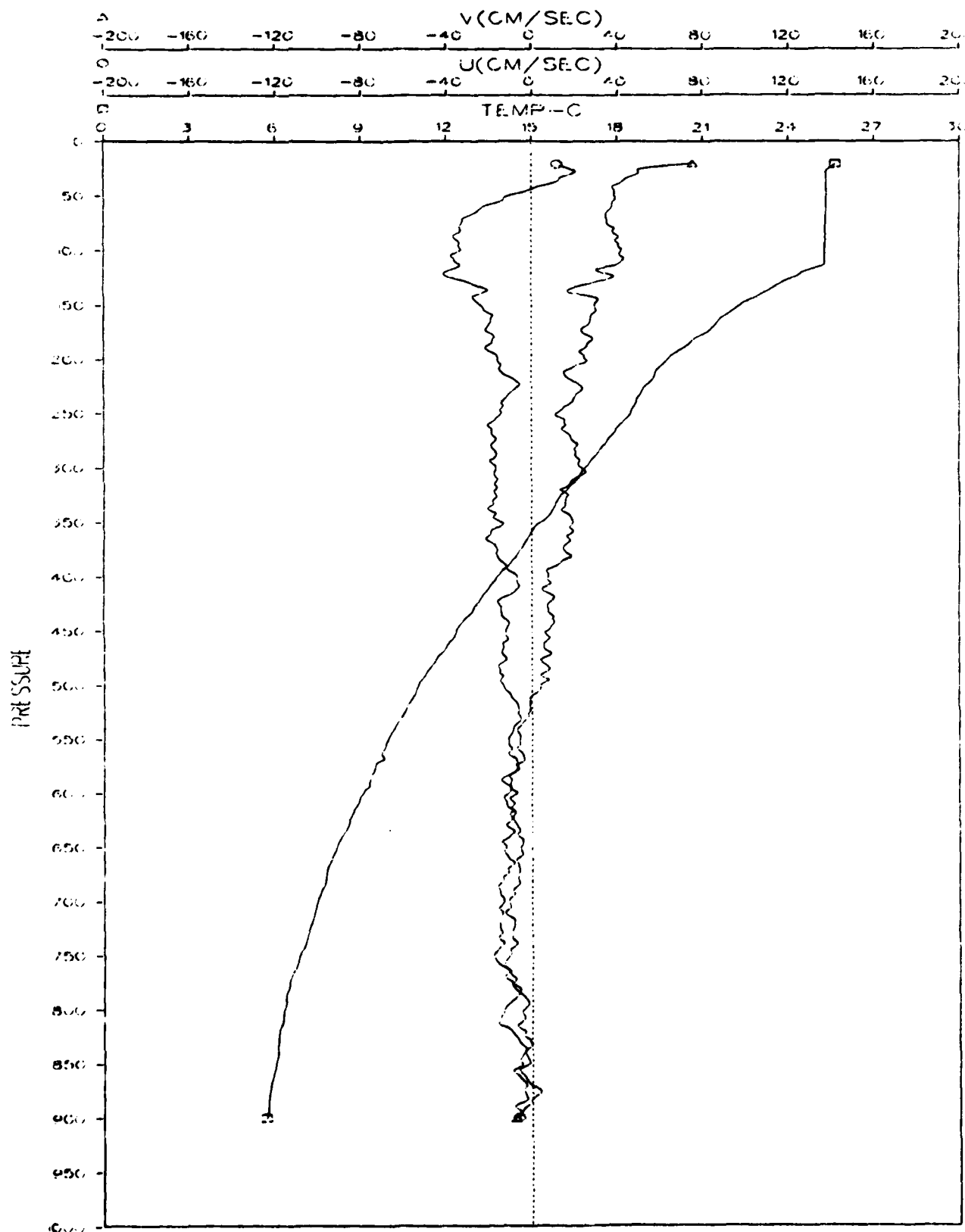


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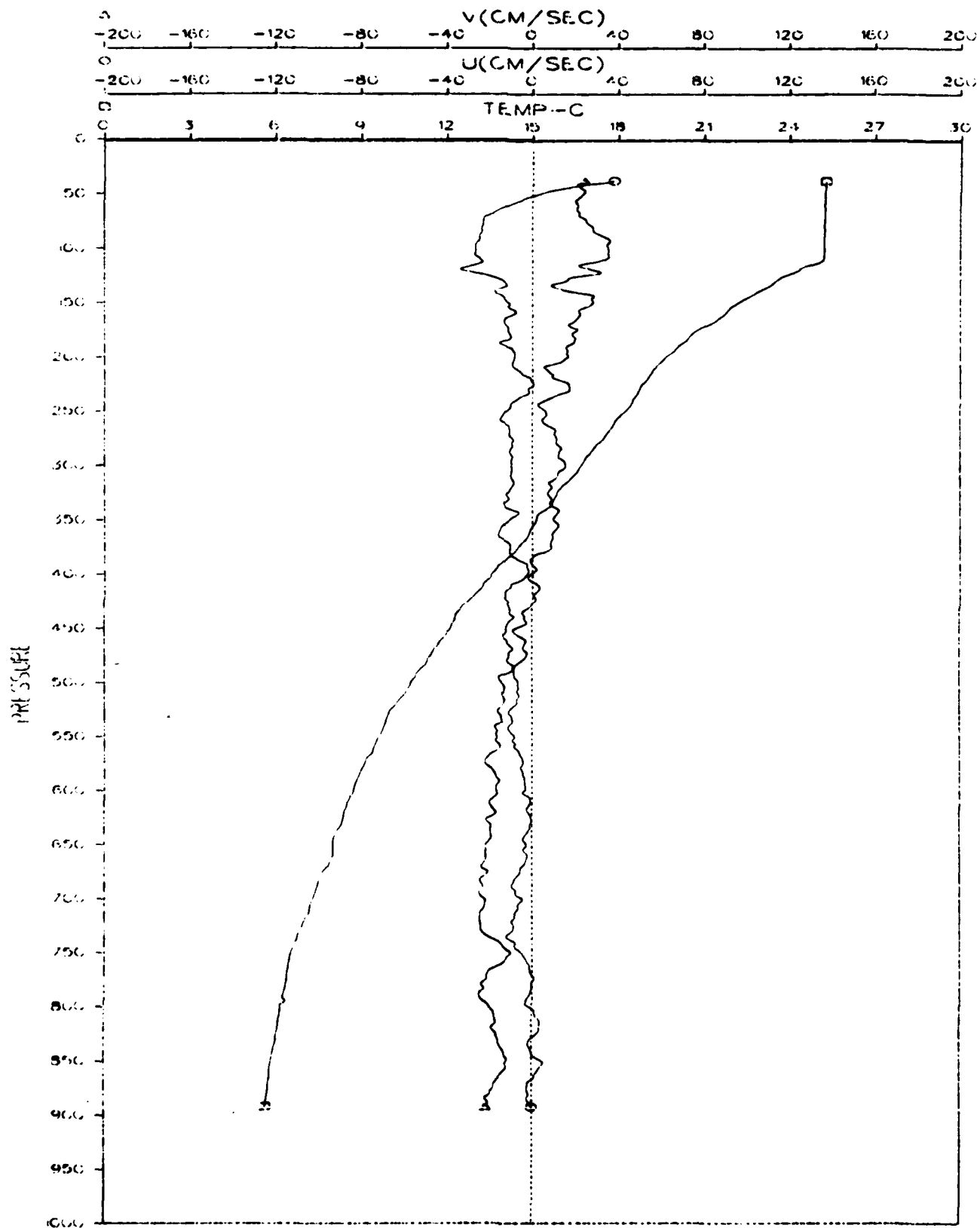


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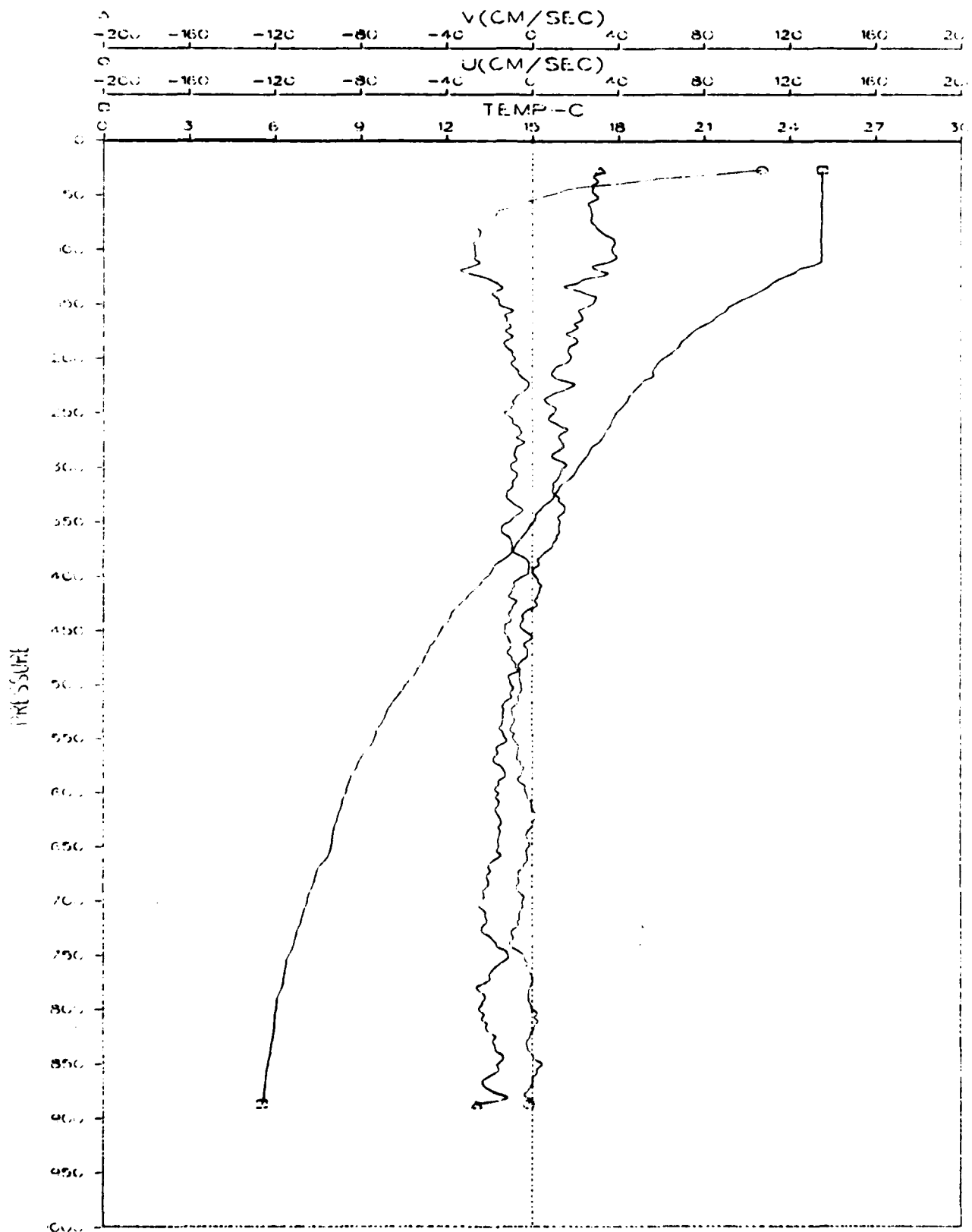


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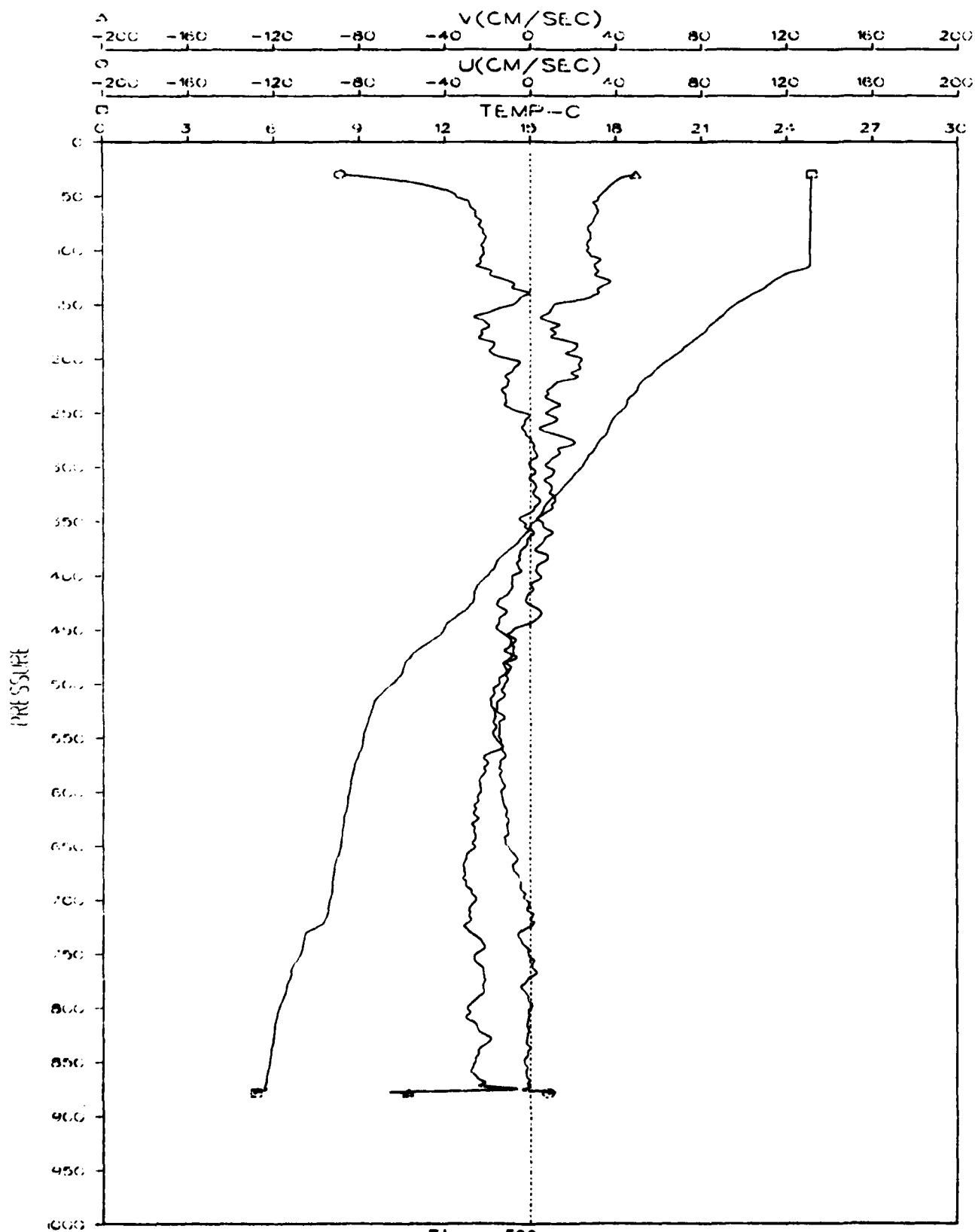


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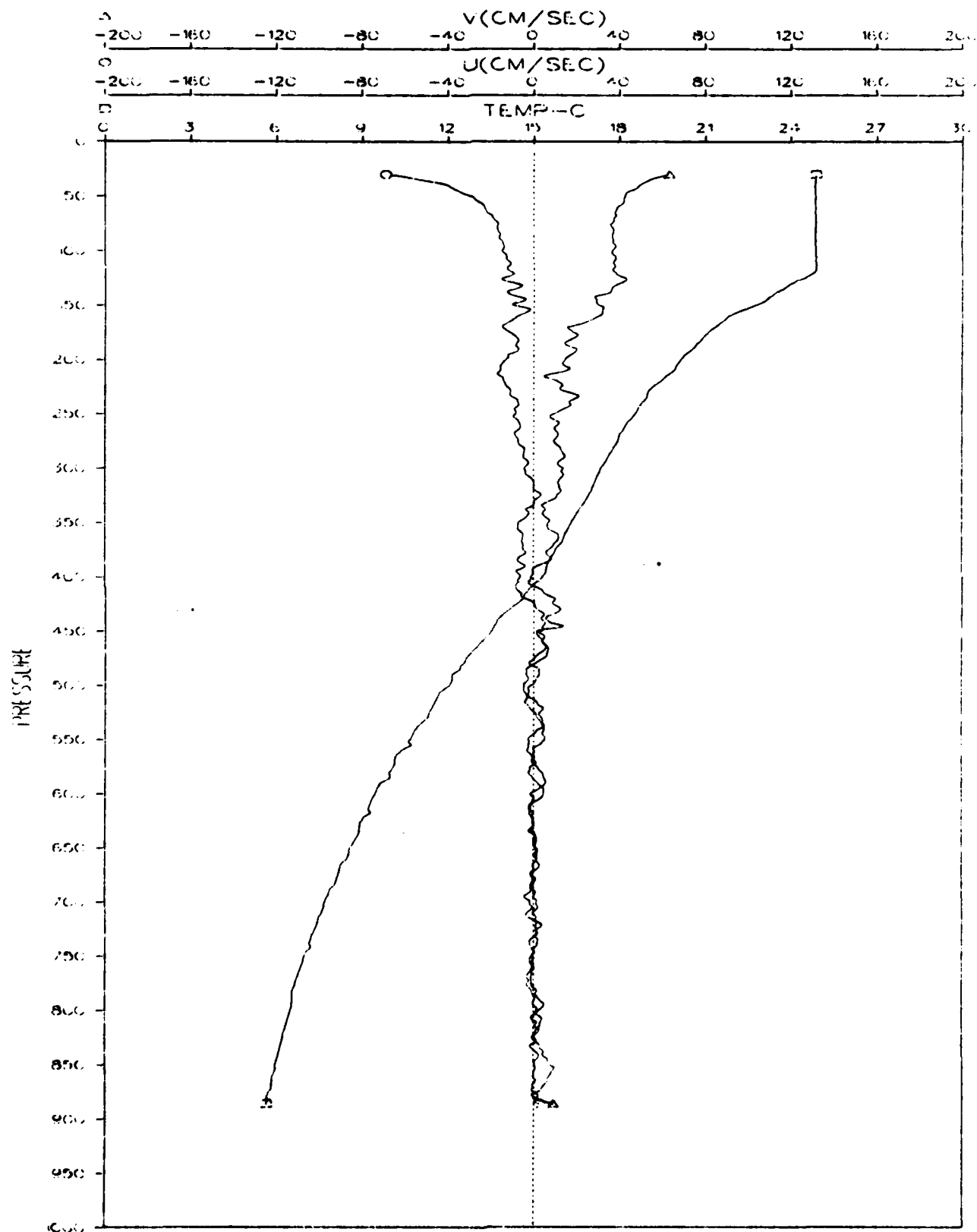


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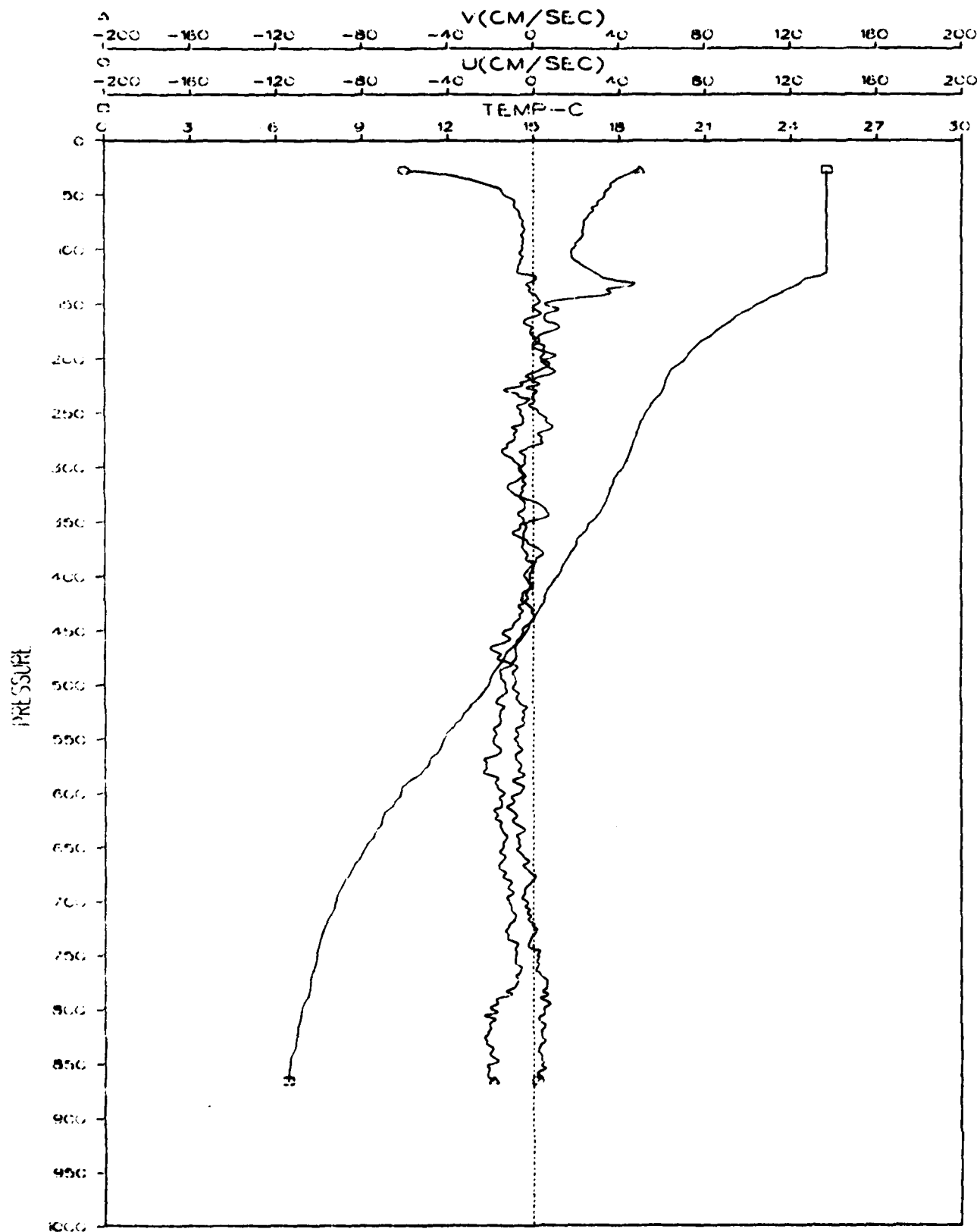


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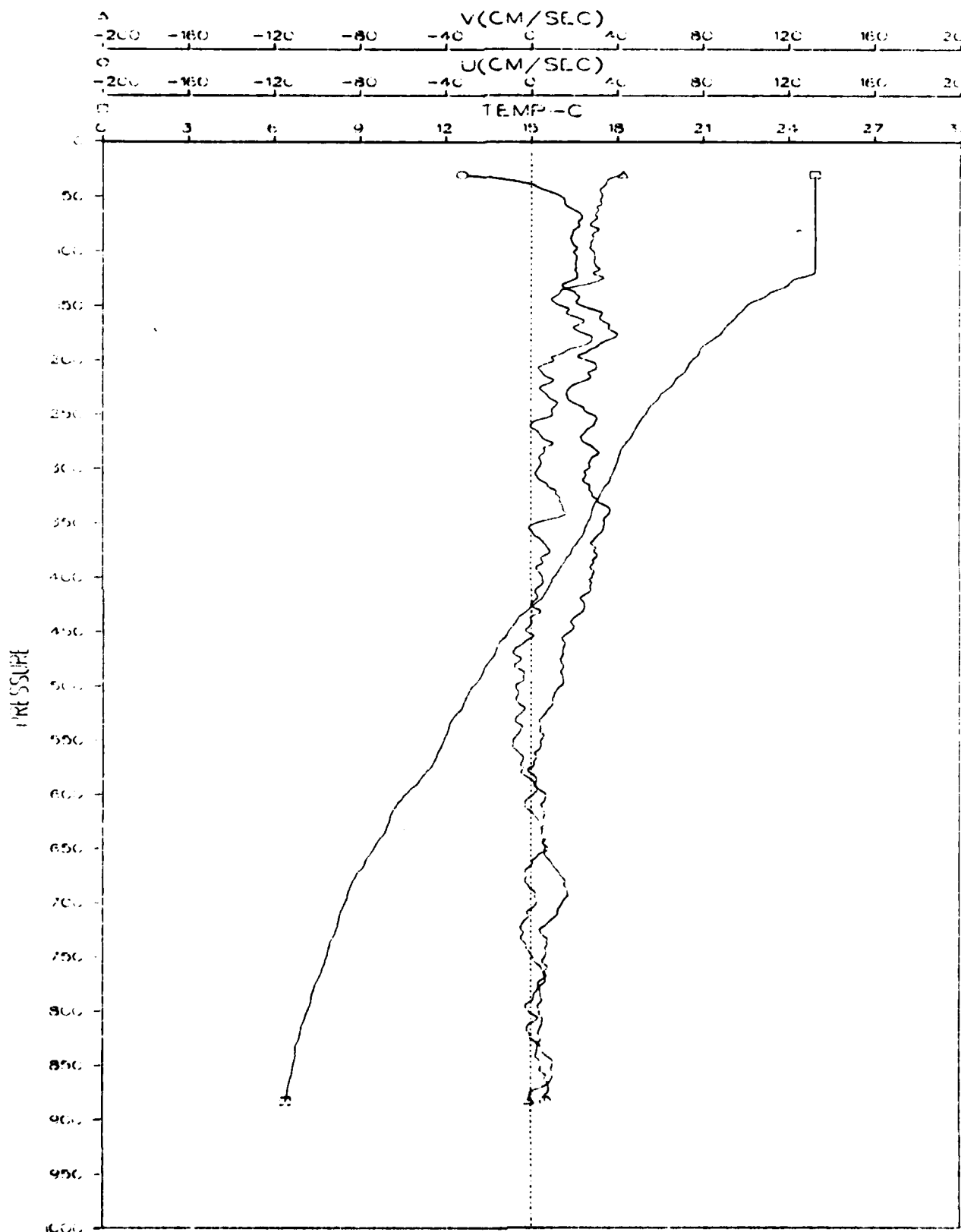


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44

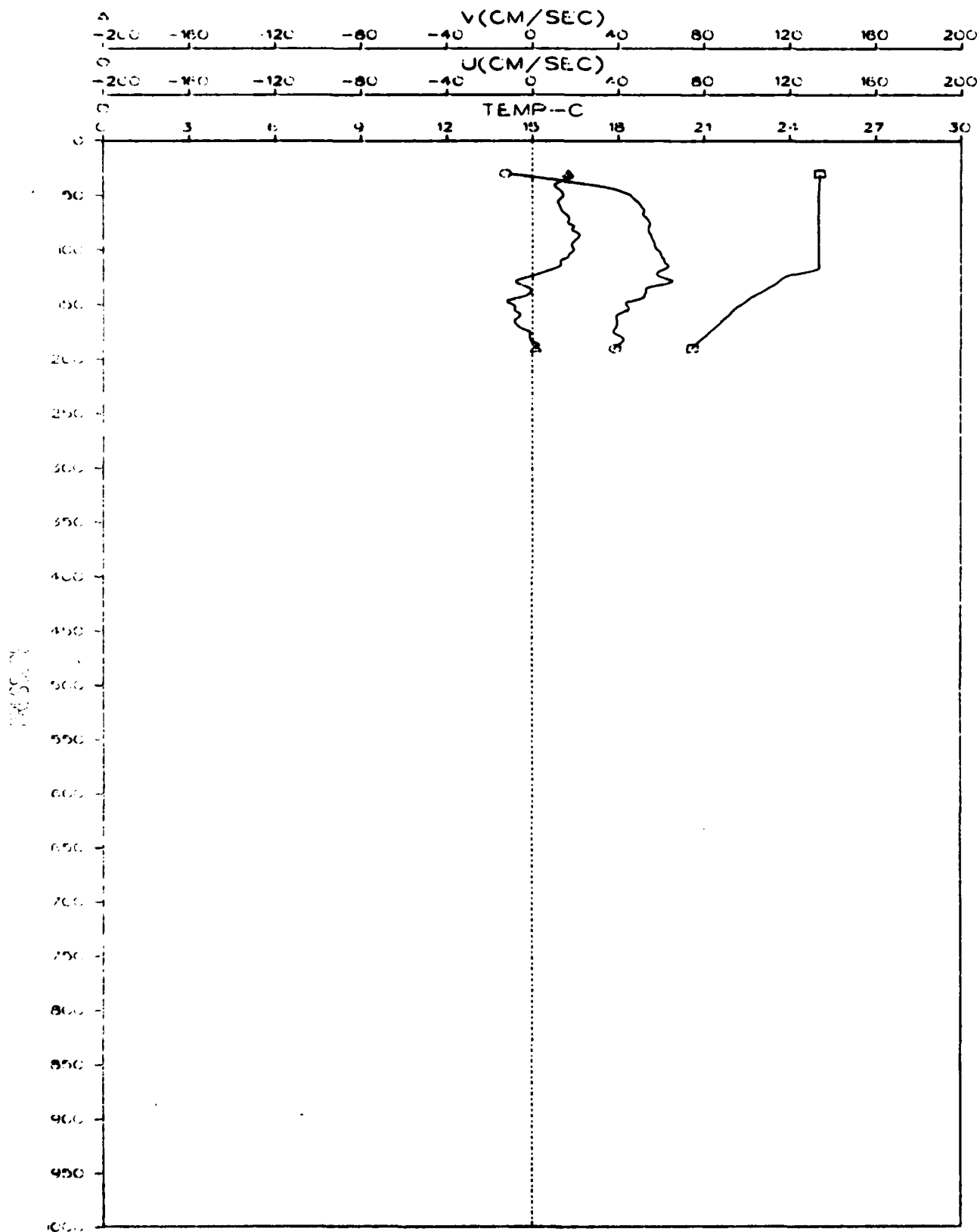


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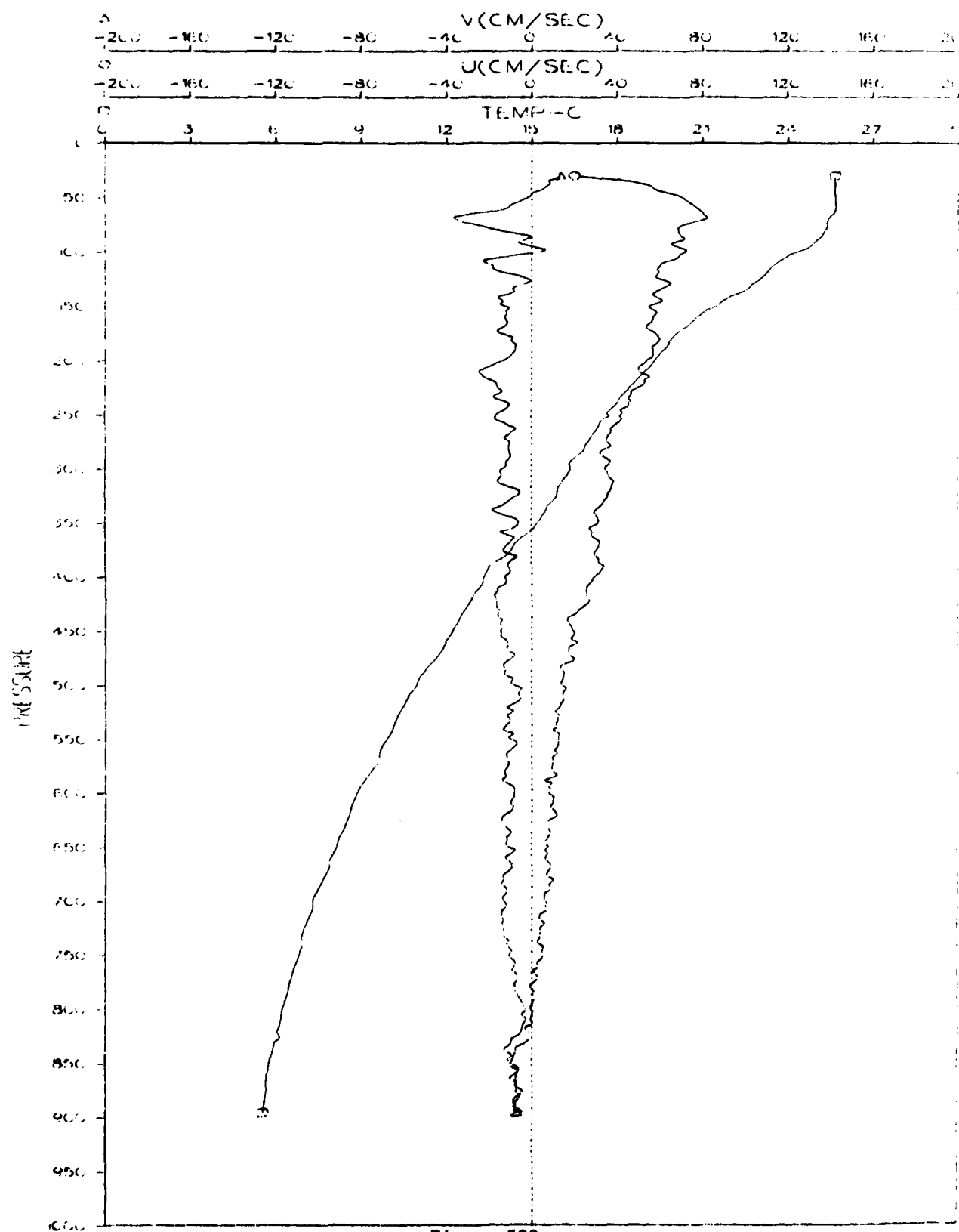


Figure 598

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		6. PERFORMING ORG. REPORT NUMBER
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Acoustically Tracked Ocean Mooring (ATOM) study spanned the period 15 December 1979 - 17 January 1980. Time series of currents, temperatures, and mooring parameters as well as profiles of temperature, conductivity and current were obtained. This report presents these data and derived statistics as a graphical summary.		

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